

A REVISION OF SOME GROUPS OF *LIPTENA*
WESTWOOD (LEPIDOPTERA : LYCAENIDAE)

BY

HENRI STEMPFER ¹²

4 Rue St Antoine, Paris 4^e, France

NEVILLE HENRY BENNETT

Wyndrush, Mill Lane, Wingrave, Aylesbury, Buckinghamshire

SUSAN JULIE MAY

21 Walton Terrace, Aylesbury, Buckinghamshire

Pp. 107-181; 6 *Plates*, 49 *Text-figures*

BULLETIN OF
THE BRITISH MUSEUM (NATURAL HISTORY)
ENTOMOLOGY

Vol. 30 No. 2

LONDON : 1974

THE BULLETIN OF THE BRITISH MUSEUM (NATURAL HISTORY), *instituted in 1949, is issued in five series corresponding to the Departments of the Museum, and an Historical series.*

Parts will appear at irregular intervals as they become ready. Volumes will contain about three or four hundred pages, and will not necessarily be completed within one calendar year.

In 1965 a separate supplementary series of longer papers was instituted, numbered serially for each Department.

This paper is Vol. 30 No. 2 of the Entomological series. The abbreviated titles of periodicals cited follow those of the World List of Scientific Periodicals.

*World List abbreviation
Bull. Br. Mus. nat. Hist. (Ent.)*

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TRUSTEES OF
THE BRITISH MUSEUM (NATURAL HISTORY)

Issued 22 February, 1974

Price £4.75

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SYNOPSIS

The white and yellow 'groups' of *Liptena* Westwood are revised and a key to the species and subspecies is provided. Seven new species and ten new subspecies are described. Four lectotypes and one neotype are designated, and the status of four taxa is altered.

INTRODUCTION

In 1963 the two senior authors erected the genus *Falcuna* for a number of species of *Liptena* Westwood which are characterized by a unique feature in the male genital armature, namely the fusion of the paired subunci along their median margins. Another group, the *Tetrarhanis*, has been separated by Karsch (1893 : 217).

Of the remaining species of *Liptena*, almost a hundred at present known, the male genitalia can be generally described as follows: the uncus more or less crescentic, the paired subunci free, the tegumen weakly sclerotized, the valvae rectangular with the two processes widely separated in their distal part, the vinculum often terminating ventrally in a long, spatulate saccus, which, contrary to the usual structural habit, is turned upward and outward, lying parallel to the ventral margins of the valvae; in some species the intervening space is filled with a mass of transparent, globular scales. These scales have been loosely termed coremata by the authors, but this usage is not in strict accordance with the definition given by Tuxen (1970). The function of these scales is a matter for conjecture, scent distribution being the most obvious answer. They are only feebly attached to the saccus, and frequently disappear during the normal dissecting processes.

Among the species of *Liptena* not treated in this paper, only the *tullia*-group and the *ideoides*-group exhibit genitalia of a type sufficiently different to merit separation from this genus: the genital structures differ markedly from those of the type-species *undularis* Hewitson (see Stempffer, 1967 : 48-53).

The most practical way of dealing with this mass of species is to group them according to their upperside ground colour. This yields four divisions: a white 'group', a yellow 'group', an orange 'group', and a black 'group'. This method is, we freely admit, quite unscientific, but gives a convenient basis for study. The present work deals only with the white and yellow colour-groups.

There is a great deal of similarity in facies within the 'groups' and so many published figures do little or nothing to aid separation. This has led to the need for numerous dissections - often as many as 10-15 have been made of a single form. The study has been a protracted one lasting several years.

Even though limited to two colour-groups only, the work is very long. It is hoped to complete the study of the remaining groups in time. A great problem remains in the determination of the species described by Schultze, all the types of which were lost, and descriptions sometimes poor.

Unless otherwise stated all material examined is either in the collection of the British Museum (Natural History), usually abbreviated to BMNH, or in that of Monsieur Stempffer. Other depositories are abbreviated as follows:

CM	Carnegie Museum, Pittsburgh
MNHN	Muséum National d'Histoire Naturelle, Paris
MNHU	Museum für Naturkunde der Humboldt-Universität, Berlin
MRAC	Musée Royal de l'Afrique Centrale, Tervuren
UM	University Museum, Oxford
ZSBS	Zoologische Sammlung des Bayerischen Staates, Munich

Of the species treated here the great majority are found in western Africa only; a small number range through the Congo Basin to Uganda and Kenya in the east. Two species, *homeyeri* Dewitz and *undularis* Hewitson, are found in the south, while the most northerly extent of the range of the genus is the Sudan (*ferrymani* (Grose-Smith & Kirby)). The authors wish to emphasize that the localities given for each form are only those known to us at the present time, and may not be limiting.

ACKNOWLEDGEMENTS

Our gratitude is here expressed to those individuals and institutions who have contributed material, loaned type-specimens, and supplied information to facilitate this work. Especially we wish to acknowledge our great debt to the late T. H. E. Jackson of Kitale, Kenya, who supplied so much of the material used in this work. Our thanks are also due to Mr T. B. Larsen, to Dr H. J. Hannemann of the Museum für Naturkunde, Berlin, to Dr B. Herting of the Staatliches Museum für Naturkunde, Stuttgart, to Dr K. W. Harde of the Staatliches Museum für Naturkunde, Ludwigsburg, to Dr W. Forster of the Zoologische Staatssammlung, Munich, to Dr J. Moucha of the National Museum of Czechoslovakia, to Mr L. A. Berger

at Tervuren, to Mr M. P. Clifton of the Coryndon Museum, Nairobi, to Dr G. Bernardi, Muséum National d'Histoire Naturelle, Paris, and to the authorities of the Carnegie Museum, Pittsburgh. We also wish to thank Mr D. K. Read of the Tring Museum for the translation of original descriptions.

LIPTENA Westwood

Liptena Westwood, [1851] : pl. 77. Type-species: *Liptena undularis* Hewitson, [1866], by subsequent designation, 1959, in *Opin. Decl. int. Commn zool. Nom.* **20** : 377-390 (Opinion 566). *Parapontia* Röber, 1892 : 280. Type-species: *Liptena undularis* Hewitson, [1866], by monotypy.

Leucolepis Karsch, 1893 : 216. Type-species: *Teriomima decipiens* Kirby, 1890, by subsequent designation by Hemming, 1964 : 133.

[*Pseudoliptena* Stempffer, 1946 : 8. Type-species: *Pseudoliptena bitje* Stempffer, 1946, by original designation. Type-species based on a composite holotype (see Hemming, 1963 : 292).]

Eyes smooth, palpi reaching well beyond frons, second joint long and laterally compressed, bearing adpressed scales, third joint rather long, acuminate; antennae of moderate length, white-ringed and with a gradually swollen club flattened apically; fore tarsi of ♂ not segmented, delicately spinose beneath.

Wing venation is not uniform throughout the genus. In *undularis* Hewitson, vein 7 on the forewing ends on the outer margin slightly below the apex, veins 3 and 4 on the hindwing arise from a short common stalk. This is the position in a number of species, e.g. *xanthostola* (Holland), *evanescens* (Kirby), *flavicans* (Grose-Smith & Kirby), *rochei* Stempffer, *undina* (Grose-Smith & Kirby), *fulvicans* Hawker-Smith, *eukrines* Druce, *homeyeri* Dewitz, *despecta* (Holland), *modesta* (Kirby), etc. In *Liptena decipiens* (Kirby) vein 7 on the forewing similarly ends below the apex, but veins 3 and 4 on the hindwing arise from a common point at the lower angle of the cell, which is the condition also in *alluaudi* Mabilie, *tulliana* Smith, *tullia* (Staudinger), *o-rubrum* (Holland), *rubromacula* Hawker-Smith, etc. The venation of *albomacula* Hawker-Smith, *ideoides* Dewitz, and *gordoni* (Druce) is identical with that of *Falcuna* Stempffer & Bennett. In *fatima* (Kirby) and *submacula* Lathy, vein 7 of the forewing terminates at the apex.

The systematic divisions which could be established on slight difference in venation do not correspond with those based on characters of the male genitalia, nor with the divisions based on ground colour. Not all the species of *Liptena* conform to a uniform pattern of male genitalia; roughly there are three patterns. The species dealt with in this paper are included in pattern A (see Stempffer, 1967: 49).

KEY TO THE SPECIES AND SUBSPECIES

1	Upperside ground colour white or cream	2
-	Upperside ground colour yellow or orange	39
2 (1)	Hindwing upperside with dark outer marginal band	3
-	Hindwing upperside without dark outer marginal band	18
3 (2)	Ground colour white	4
-	Ground colour cream	17
4 (3)	Forewing upperside with costal band slightly narrower than outer marginal band. Hindwing outer marginal band slightly narrower than that of forewing. (From Nigeria and Cameroun.)	
	♂ genitalia (Text-fig. 2): uncus trapezoidal with a broad depression in the distal margin; subunci (Text-fig. 1a) broadened gradually towards their	

- triangular termination; saccus short and pointed; dorsal process of the valva with a blunt, hooked projection and an excision between this and the slender apex *opaca opaca* (p. 118)
- Characters not as above 5
- 5 (4) Forewing upperside with costal band covering almost the entire discoidal cell. Outer marginal bands on fore- and hindwing equal in width to costal band of forewing. (From Gabon.)
♂ genitalia (Text-fig. 1b): subunci slender and triangular *opaca gabunica* (p. 119)
- Characters not as above 6
- 6 (5) Forewing upperside with costal band narrower than outer marginal band. Hindwing outer marginal band of same width as forewing costal band. (From Cameroun and Congo (Brazzaville).)
♂ genitalia: subunci (Text-fig. 1c) much dilated towards the tip, and bearing a hook on the upper margin; valva with the ventral process narrow *opaca centralis* (p. 120)
- Characters not as above 7
- 7 (6) Forewing upperside with costal and outer marginal bands of approximately equal width; outer marginal band tapering towards tornus. Hindwing outer marginal band narrower than that of forewing. Forewing underside with apex bearing large patch of white ground colour. (From Uganda.)
♂ genitalia: subunci (Text-fig. 1d) narrow at base, dilated centrally, then tapering to a sharp point *opaca ugandana* (p. 120)
- Characters not as above 8
- 8 (7) Forewing upperside with outer marginal band broader than costal band. Hindwing outer marginal band of similar width to costal band of forewing. (From Cameroun and Zaire.)
♂ genitalia (Text-fig. 3): subunci slender, angled, and sharply pointed; ventral process of valva longer than the dorsal *opaca sankuru* (p. 121)
- Characters not as above 9
- 9 (8) Forewing upperside with outer marginal band broader than costal band, and tapering towards tornus. Hindwing outer marginal band of similar width to forewing costal band. (From Cameroun, Zaire and Uganda.)
♂ genitalia (Text-fig. 4): uncus with a weakly-convex distal margin; subunci angled, and dilated centrally; ventral process of valva long and fine, dorsal process without a hooked projection *albomacula* (p. 123)
- Characters not as above 10
- 10 (9) Forewing upperside with costal band invading upper part of discoidal cell; outer marginal band a little broader than the costal. No discoidal markings on upperside. Length of forewing 15 mm. (From Nigeria.)
♂ genitalia (Text-fig. 10): uncus bifid, the two parts separated by a deep, rounded depression; subunci long, curved, and slender. *submacula submacula* (p. 128)
- Characters not as above 11
- 11 (10) Forewing upperside with costal band covering almost the entire discoidal cell. Discoidal marks present on upperside of all wings. Hindwing underside with discoidal spot of moderate size. Length of forewing 15 mm. (From Ivory Coast and Ghana.)
♂ genitalia (Text-fig. 11): subunci in the form of a shallow, horizontal letter 'Y' *submacula tringa* (p. 130)
- Characters not as above 12
- 12 (11) Forewing upperside with outer marginal band broad, 4 mm at tornus. Length of forewing 17 mm. (Known from Ghana only.)
♂ genitalia (Text-fig. 12): subunci strongly curved, and dilated centrally *submacula maesseni* (p. 131)

- Characters not as above 13
- 13 (12) Forewing upperside with costal band obscuring base of the discoidal cell, outer marginal band of approximately the same width. Hindwing underside with large discoidal spot. Length of forewing 14.5 mm. (From Sierra Leone and Liberia.)
♂ genitalia (Text-fig. 13): subunci curved, in the shape of a cobbler's last
submacula liberiana (p. 132)
- Characters not as above 14
- 14 (13) Forewing upperside with costal band entirely covering the discoidal cell, outer marginal band very broad, but narrower than costal band, leaving only a small, white inner marginal area. Hindwing upperside outer marginal band less than half the width of that of forewing. Hindwing underside with several small, well-defined black spots in basal area . . . *perobscura* (p. 159)
- Characters not as above 15
- 15 (14) Forewing upperside with costal band covering almost the entire discoidal cell; outer marginal band approximately equal in width to the costal. Hindwing outer marginal band a little more than half the width of that of forewing. Discoidal marks on all wings large, quadrate and rather smudgy. (Known only from Ivory Coast.)
♂ genitalia (Text-fig. 6): uncus with a blunt median point; valvae triangular, with the two processes widely separated distally, the dorsal one terminating in a sharp point; aedeagus curved. *griveaudi* (p. 124)
- Characters not as above 16
- 16 (15) Forewing upperside with costal band covering approximately half the discoidal cell; outer marginal band of uniform width, and broader than the costal. Hindwing outer marginal band a little narrower than that of forewing. Antennal club orange. (From Ivory Coast, Nigeria and Cameroun.)
♂ genitalia (Text-fig. 5): uncus with distal margin weakly concave; subunci long and tapering; valvae rectangular, with dorsal process excised at tip; aedeagus strongly curved *titel* (p. 124)
- Forewing upperside with costal band covering almost the entire discoidal cell; outer marginal band of approximately the same width as costal. Hindwing outer marginal band of similar width to that of forewing. A discoidal spot present on all wings. (From Cameroun.)
♂ genitalia (Text-fig. 7): uncus elongate and conical, with a rounded excision at apex; subunci shaped like a cobbler's last; aedeagus long, gently curved, with a small dorsal tooth and a large, blunt, ventral projection
confusa (p. 125)
- 17 (3) Hindwing underside with discoidal spot of moderate size. Length of forewing 14 mm. (From Cameroun and Congo (Brazzaville).)
♂ genitalia (Text-figs 8, 9b): subunci in the shape of a horizontal letter 'Y', the lower arm of the 'Y' more slender than the upper; aedeagus longer than valva, slender centrally, and dilated at the tip *ouesso ouesso* (p. 126)
- Hindwing underside with a large discoidal spot. Length of forewing 16 mm. (From Congo (Brazzaville).)
♂ genitalia (Text-fig 9a): subunci dilated centrally *ouesso mayombe* (p. 128)
- 18 (2) Hindwing underside marked by 5 or more transverse lines 19
- Characters not as above 21
- 19 (18) Forewing upperside with a brown arc arising from base of costa; apical patch extending down outer margin to vein 2 *ferrymani* (p. 152)
- Characters not as above 20
- 20 (19) Forewing upperside unmarked except for the dark apical patch, which is angled, extending down outer margin almost to vein 4. Length of forewing 20 mm
undularis (p. 150)

- Forewing upperside with costa broadly brown throughout; apical patch terminating in a fine line between veins 3 and 2 on outer margin. Length of forewing 16 mm **septistrigata** (p. 154)
- 21 (18) Hindwing underside marked by one or more spots 22
- Characters not as above 26
- 22 (21) Forewing upperside with the broad, blackish-brown costal band invading the discoidal cell. Upperside ground colour white. Hindwing underside with a large, rectangular, subcostal spot in cell space 6 **nigromarginata** (p. 157)
- Characters not as above 23
- 23 (22) Forewing upperside with costa black throughout; apical patch small and angled, extending down outer margin to vein 4. Upperside ground colour creamy white. Hindwing underside with three of the spots of approximately equal size: one in the discoidal cell, and two subcostal. **inframacula** (p. 149)
- Characters not as above 24
- 24 (23) Forewing upperside with costa brown throughout. Hindwing underside bearing a well-defined discoidal spot **subsuffusa** (p. 158)
- Characters not as above 25
- 25 (24) Forewing upperside with proximal half of costa cream; base of wing tinged with orange. Underside of all wings bearing a discoidal spot **fatima** (p. 133)
- Forewing upperside with proximal half of costa dull white, extreme base of costa fuscous. Underside of all wings with a discoidal line; hindwing with a brown spot within the discoidal cell **bassae** (p. 142)
- 26 (21) Hindwing underside without dark markings. Upperside ground colour cream. Legs black 27
- Characters not as above 31
- 27 (26) Forewing upperside with costa broadly brown throughout. Hindwing underside without yellow marginal lines. (From Uganda.)
♂ genitalia (Text-fig. 23): subunci with a long apophysis; valva with a short ventral process; aedeagus curved, with an acute extremity **hapale** (p. 144)
- Characters not as above 28
- 28 (27) Forewing upperside with an evenly curved inner edge to the dark apical patch. (Known only from Ghana and Nigeria.)
♂ genitalia (Text-fig. 28): uncus triangular; subunci long, of medium breadth, and with a tapered base **pearmani** (p. 148)
- Characters not as above 29
- 29 (28) Forewing upperside with large apical patch. (From Congo (Brazzaville).)
♂ genitalia (Text-fig. 27): subunci short and broad; apex of valva long, narrow, and whip-like **decipiens etoumbi** (p. 148)
- Characters not as above 30
- 30 (29) Forewing upperside with apical patch of moderate size. (From Nigeria and north Cameroun.)
♂ genitalia (Text-fig. 25): uncus trapezoidal; subunci slender and of uniform width; apex of valva broadly triangular **decipiens decipiens** (p. 145)
- Forewing upperside with apical patch of moderate size. (From south Cameroun and Gabon.)
♂ genitalia (Text-fig. 26): subunci broad; apex of valva broadly triangular **decipiens leucostola** (p. 146)
- 31 (26) Hindwing underside without dark markings. Upperside ground colour white. Legs yellow and fuscous 32
- Hindwing underside with dark outer marginal band 38
- 32 (31) Costa distinctly brown throughout 33
- Costa only partially brown, or white in parts 36
- 33 (32) Forewing upperside with costa broadly blackish brown throughout, apical

- patch extending down outer margin to vein 4. Upperside ground colour white. Length of forewing 16.5 mm. (From Ivory Coast.)
- ♂ genitalia (Text-fig. 22): uncus long; subunci weakly curved, with a swollen tip; valvae rectangular, with the dorsal process folded across the broad ventral process; aedeagus small and slender, dilated before the pointed tip *tiassale* (p. 143)
- Characters not as above 34
- 34 (33) Forewing upperside with costa broadly brown throughout, apical patch extending down outer margin to vein 3. Upperside ground colour dirty white. Length of forewing 15 mm. (From Cameroun, Fernando Po and Gabon.)
- ♂ genitalia (Text-fig. 33): uncus with two triangular lobes, separated by a deep concavity; subunci curved, swollen centrally, the distal extremity anvil-shaped; valvae with the dorsal process ending in a broad hook, the ventral process rounded distally; aedeagus long and stout, with the distal third dilated *subundularis* (p. 156)
- Characters not as above 35
- 35 (34) Forewing upperside with costa blackish brown throughout, the apical patch extending down outer margin to vein 2, and having an evenly curved inner edge. Ground colour of both surfaces pure white, no yellowish tinge. Forewing underside usually with one or more irregular fuscous bands in apical area. Length of forewing 14.5 mm. (From Ivory Coast, Nigeria, Cameroun and Uganda.)
- ♂ genitalia (Text-fig. 18): uncus with distal margin deeply concave; subunci strongly curved, dilated centrally; dorsal process of valva long and vermiform, ventral process broad and rounded *augusta* (p. 138)
- Forewing upperside with costa blackish brown throughout, apical patch terminating abruptly at vein 4 on outer margin. Upperside ground colour pure white. Length of forewing 14 mm. (From Cameroun and Congo (Brazzaville).)
- ♂ genitalia (Text-fig. 19): uncus with distal margin regularly rounded, slightly depressed in the middle; valva with dorsal process short and moderately broad, ventral process terminating obliquely *ilaro* (p. 139)
- 36 (32) Forewing upperside with costa brown at base, dusted with brown medially; apical patch small, terminating at vein 4 on outer margin. Upperside ground colour white. Length of forewing 14 mm. (Known only from Cameroun, Congo (Brazzaville) and Uganda.)
- ♂ genitalia (Text-fig. 17): uncus widely excised at distal margin; subunci slender and straight; saccus shaped like a fish-tail; valva with a short dorsal process; aedeagus straight *batesana* (p. 137)
- Characters not as above 37
- 37 (36) Forewing upperside with costa white, except in apical region, brown at base; apical marking of moderate size, 3 mm in width at vein 6. Forewing underside with costa and outer margin tinged with bright yellow. Length of forewing 14 mm. (From Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana and Nigeria.)
- ♂ genitalia: subunci slightly swollen centrally *albicans* (p. 134)
- Forewing upperside with costa white, except at apex; apical marking slight, only 1.5-2.0 mm in breadth at vein 6. Forewing underside tinged with yellow at base of costa. Length of forewing 15 mm. (From Ivory Coast and Nigeria)
- ♂ genitalia (Text-fig. 16): subunci long, sinuate and very slender *alluaudi* (p. 135)
- 38 (31) Forewing upperside with costa broadly blackish brown throughout; apical patch large, terminating between veins 3 and 2 on outer margin. Hindwing

- underside with dark outer marginal band of 3 mm width. (From Guinea, Sierra Leone, Liberia, Ghana and Nigeria.) . . . *simplicia simplicia* (p. 140)
- Forewing upperside with costa brown at base, apical patch small, terminating between veins 4 and 3 on outer margin. Hindwing underside with dark outer marginal band of 1.5 mm width. (From Ivory Coast.) . . . *simplicia f. semilimbata* (p. 142)
- 39 (1) Hindwing underside with bold spots 58
- Characters not as above 40
- 40 (39) Hindwing underside with irregular barred markings 51
- Characters not as above 41
- 41 (40) Underside bearing orange, ochreous or tawny linear markings 49
- Underside hindwing with no dark markings, or with yellow markings 42
- 42 (41) Forewing upperside with apical marking small to non-existent. Ground colour weak yellow to yellowish cream. Length of forewing 25.5–29.0 mm. ♂ genitalia (Text-fig. 37): subunci short and straight, dilated distally, with a short hook at the tip; aedeagus short and robust, dilated towards the rounded distal extremity, and furnished with a large, strong tooth on the ventral surface *evanescens evanescens* (p. 160)
- Characters not as above 43
- 43 (42) Forewing upperside with apical patch usually present, but not reaching outer margin; base of costa brown. Upperside ground colour yellow. Length of forewing 23.5–27.5 mm *evanescens xanthis* (p. 161)
- Characters not as above 44
- 44 (43) Forewing upperside apical marking of moderate size, with its inner border evenly curved, not angled. Ground colour deep, rich yellow. Underside ground colour uniform, not paler at inner margin of forewing; hindwing without yellow submarginal lines. ♂ genitalia (Text-fig. 39): subunci robust and anvil-shaped; aedeagus short and stout, with a small tooth on the ventral surface, and an obliquely cut tip *bolivari* (p. 163)
- Characters not as above 45
- 45 (44) Forewing upperside with dark costal band up to 1 mm in width; apical patch with evenly curved inner edge extending almost to tornus. Palpi blackish brown. Length of forewing 13 mm. (From Rio Muni and Gabon.) ♂ genitalia: subunci short and straight, dilated distally, bearing a short hook at tip; aedeagus small, the distal third angled and having a blunt tip *xanthostola xanthostola* (p. 165)
- Characters not as above 46
- 46 (45) Forewing upperside apical patch extending in an even curve from mid-costa to vein 3 on outer margin. Palpi yellow at base with tips blackish brown. Length of forewing 14.0–14.5 mm. (From Sierra Leone, Ivory Coast and Ghana.) ♂ genitalia as in *x. xanthostola* *xanthostola coomassiensis* (p. 166)
- Characters not as above 47
- 47 (46) Forewing upperside with proximal half of costa dusted with dark scales; apical patch covering approximately one-third of wing and terminating at vein 2 on outer margin—its inner border may be evenly curved, irregular, or angled. Hindwing underside with double yellow submarginal lines. Palpi blackish brown. Length of forewing 15–17 mm. (From Zaire, Uganda, Kenya and Sudan.) ♂ genitalia as in *x. xanthostola* *xanthostola xantha* (p. 166)
- Characters not as above, forewing upperside with large apical patch 48

- 48 (47) Forewing upperside with dark costal band not invading discoidal cell. Ground colour pale primrose. Hindwing underside without yellow submarginal lines. Length of forewing: 16.5 mm.
 ♂ genitalia (Text-fig. 42): subunci moderately long, bearing a point at the tip; aedeagus large, the basal half greatly enlarged with its extremity squarely cut, the distal half cylindrical **overlaeti** (p. 169)
- Forewing upperside with dark costal band invading discoidal cell. Ground colour sulphur yellow. Hindwing underside without yellow submarginal lines. Length of forewing: 12.5 mm.
 ♂ genitalia (Text-fig. 43): subuncistout, anvil-shaped; aedeagus boomerang-shaped, swollen centrally and with an acute tip **fontainei** (p. 169)
- 49 (41) Forewing upperside with reduced apical patch and no costal band
evanescens (*immaculata* sensu Aurivillius) (p. 160)
- Characters not as above 50
- 50 (49) Underside entirely orange-yellow, including forewing apical region, and marked by orange transverse lines situated mainly on the proximal half of the wings; discoidal line present on all wings **ochrea** (p. 162)
- Underside with forewing yellow, apical region cream; hindwing cream, marked by narrow ochreous, transverse bars, but without discoidal line
undina (p. 164)
- 51 (40) Forewing upperside with a broad, dark costal band encroaching on upper limit of discoidal cell. Ground colour tawny-orange. Hindwing underside markings blurred 57
- Forewing upperside with costa brown, or brown and yellow. Ground colour yellow or orange. Hindwing underside markings distinct 52
- 52 (51) Hindwing underside with barring purplish wine. Upperside ground colour yellowish orange. (Known only from Zaire.) **flavicans aequatorialis** (p. 176)
- Hindwing underside with barring fuscous 53
- 53 (52) Hindwing underside ground colour very pale - almost white. Upperside ground colour yellow; forewing with apical patch of moderate size. (From Uganda.) **flavicans katera** (p. 176)
- Characters not as above 54
- 54 (53) Hindwing underside showing regular brown bars of uniform width, no fusion of yellow ground colour in central area of wing (Text-fig. 47a). Ground colour on both surfaces deep glowing orange. Forewing upperside with large apical patch. (From south Cameroun and Congo Basin.)
flavicans praeusta (p. 175)
- Characters not as above 55
- 55 (54) Hindwing underside with a dark median band enlarged into a blotch on the discoidal vein, and the next band distad widened to form a rectangular costal blotch (in cell spaces 7 and 6). Length of forewing 15-17 mm.
 ♂ genitalia (Text-fig. 45): subunci with their distal third divided into two processes **rocheti** (p. 172)
- Characters not as above 56
- 56 (55) Hindwing underside showing a slight fusion of yellow ground colour, due to a break in one of the brown bars (Text-fig. 47c). Forewing upperside with costa brown throughout. (From west and south Cameroun.)
flavicans flavicans (p. 173)
- Hindwing underside with fusion of yellow ground colour in the upper median area, due to break in two of the brown bars (Text-fig. 47b). Forewing upperside with proximal half of costa yellow. (From Ivory Coast, Nigeria and west Cameroun.) **flavicans oniens** (p. 174)
- 57 (51) ♂ genitalia: distal border of the uncus with a deep concavity separating two projections; subunci slender, tapering to a point **durbania** (p. 176)

- ♂ genitalia: uncus widely excised at the distal margin; subunci slender and straight, hooked at tip *bergeri* (p. 177)
- 58 (39) Hindwing underside with two black spots near costa. (From Zaire, south-east Angola, Rhodesia and Tanzania) *homeyeri homeyeri* (p. 170)
- Hindwing underside with only one black spot situated midway along the costa. (From north and central Angola) *homeyeri straminea* (p. 171)

DESCRIPTIONS OF SPECIES AND SUBSPECIES

Liptena opaca (Kirby)

Larinopoda opaca Kirby, 1890 : 266.

This species is distributed through Nigeria, Cameroun, Gabon, Congo (Brazzaville), Zaire and Uganda. Other species of *Liptena* found within the limit of its range and with which *opaca* may be confused are: *submacula*, *titei*, and *albomacula*. *L. submacula* (from Nigeria) does not possess discoidal markings on its upper surface and also differs from *opaca* in the relative widths of the dark bands on the upperside. *L. titei* also differs from *opaca* by the relative widths of these dark bands and in the colour of the antennal club (see key, nos. 4, 16). *L. albomacula* is more difficult to separate; the forewing outer marginal band is tapered towards the tornus and there is no discoidal marking on the hindwing upperside, but the most definite characters for separation are provided by the male genitalia, where numerous small differences can be found; however, the most positive difference is shown by the dorsal process of the valva which does not possess a blunt, hooked projection like that of *opaca*.

Liptena opaca opaca (Kirby)

(Pl. I, figs 1, 4; Text-figs 1a, 2)

Larinopoda opaca Kirby, 1890 : 266. LECTOTYPE ♂, CAMEROUN (*Preuss*) (BMNH), here designated [examined].

Larinopoda opaca Kirby; Grose-Smith & Kirby, 1892a : pl. 16, figs 3, 4.

Liptena opaca var. *immaculata* Grunberg, 1910 : 477. 2 syntypes, sex unknown, EQUATORIAL GUINEA: Rio Muni, Alcu, 15.vi.1906 and 26.ix.1906 (depository unknown).

The original series of this species was destroyed in the last world war, with the exception of one male specimen which is in the BMNH collection. It bears a label 'Kamerun int. Pr.', also a faded mauve label 'Origin.' of the kind used by Staudinger on his syntypes. The example agrees with the original description and is here designated as lectotype.

The nominate subspecies is recorded from Nigeria and Cameroun.

♂. *Upperside*. Ground colour pale cream-white. Forewing with the costa broadly brown throughout its length, this coloration extending as an even broader band, 4 mm in width, down the outer margin. It continues as a slightly narrower band along the outer margin of the hindwing; a large, oval, brown discoidal spot is the only other marking on the hindwing upperside.

Underside. Similar to the upperside except that the costal band of the forewing is less well-defined, and that the outer marginal band is not quite as broad, neither does it reach the tornus. There is no light patch at the apex of the forewing underside.

Length of forewing: 15 mm. Legs orange, the tarsi ringed with dark brown; palpi with dark brown and orange scaling; antennae dark brown ringed with white, the club tipped with orange.

♂ *genitalia.* Tegumen rectangular surmounted by a trapezoidal uncus with a broad depression at the distal margin. Subunci broadened gradually towards their termination which is approximately in the form of an isosceles triangle. Vinculum narrow with a short, pointed saccus. Valvae rectangular, the two processes widely separated in the distal part; the dorsal process exhibits a blunt, hooked projection with an excision between this and the slender apex; the ventral process is moderately broad, curved, with a rounded apex. Aedeagus long and straight, enlarged at the tip.

♀. The females of *opaca* are not so heavily marked as the males, the outer marginal bands are narrower and the discoidal spot on the hindwing upperside is reduced to a few brown scales, or absent entirely.

MATERIAL EXAMINED.

Lectotype ♂, CAMEROUN: 'Kamerun int. Pr.', dissection no. NHB. 1956-2155, B.M. Type No. Rhop. 17252.

NIGERIA: 1 ♀, Ndebizi, Calabar Prov., -ii.1958 (*T. H. E. Jackson*); 1 ♀, Uwet, -x.1920, Cator coll.; 1 ♀, Akpabuyo, southern Nigeria, -i.1921, Cator coll.; 1 ♀, Obudu, Ogoja Prov., -v.1961 (*T. H. E. Jackson*).

Liptena opaca gabunica subsp. n.

(Pl. I, figs 2, 5; Text-fig. 1b)

Recorded from Gabon only.

♂. *Upperside.* Ground colour less creamy than in *o. opaca*, otherwise similar except that the costal band is slightly broader, obscuring the greater part of the cell. The costal and outer marginal bands are of approximately equal width.

Underside. Similar to that of *o. opaca*, ground colour slightly whiter. On the forewing the brown costal band is of uniform width from base to apex, but not curving across the apex to meet the outer marginal band as in *o. opaca*; the outer marginal band is also narrower. On the hindwing the discoidal spot is much smaller. The specimens of *gabunica* in the BMNH tend to be of smaller size than the nominate race.

Length of forewing: 15 mm. Legs orange; palpi and antennae as in *o. opaca*.

♂ *genitalia.* Differs from *o. opaca* in the subunci, which are more slender.

♀. Markings and size as in the ♂.

MATERIAL EXAMINED.

Holotype ♂, GABON: '*opaca* Kirby Gabon', ex Oberthür coll., dissection no. NHB. 1959-2173, B.M. Type No. Rhop. 17253.

Paratypes. GABON: allotype ♀, Ogowe, Godman & Salvin coll., B.M. Type No. Rhop. 17254; 1 ♂, as holotype, dissection no. NHB. 1959-2170; 1 ♂, Ogowe, ex Grose-Smith coll., dissection no. NHB. 1959-2180; 1 ♀, Godman & Salvin coll.; 1 ♀, Kuilu, 1892 (*Mocquerys*); 1 ♂, (this specimen in Stempffer coll.); 1 ♂, Lake

Asebbe, Fernan-Vaz, -i.1908 (*Dr Ansorge*), dissection no. NHB. 1959-2172; 1 ♀, Lake Asebbe, Fernan-Vaz, -i.1908 (*Dr Ansorge*); 1 ♀ Fernan-Vaz (this specimen in Stempffer coll.).

***Liptena opaca centralis* subsp. n.**

(Pl. 1, figs 3, 6; Text-fig. 1c)

Recorded from Cameroun and Congo (Brazzaville).

♂. *Upperside*. Ground colour white. Forewing with the brown costal border broader than in *o. opaca*, the small discoidal streak is confluent with the costal border. The outer marginal band is much broader than in *o. opaca*, measuring 4 mm, and curving inwards to meet the costal band. On the hindwing the discoidal spot of the underside is visible through the wing, just a few brown scales forming the faint discoidal line on the upperside.

Underside. Ground colour of a purer white than the upperside. At the apex of the forewing the white ground colour breaks through the brown costal band. This light patch is larger in examples from Congo (Brazzaville). There is a small, faint, discoidal streak on the forewing and a well-defined discoidal spot on the hindwing.

Length of forewing : 14 mm. Palpi black; legs and antennae as in typical *opaca*.

♂ *genitalia*. The subunci differ from those of *o. opaca* (see Text-figs), also the ventral process of the valva is much narrower in this form.

♀. Markings and size as in the ♂.

MATERIAL EXAMINED.

Holotype ♂, CONGO (BRAZZAVILLE): 'Etoumbi, Moyen Congo, Fr. Equat. Afr., Mar. 1959, T. H. E. Jackson', dissection no. NHB. 1967-2664, B.M. Type No. Rhop. 17255.

Paratypes. CONGO (BRAZZAVILLE): allotype ♀, Etoumbi, -xi.1958 (*T. H. E. Jackson*), B.M. Type No. Rhop. 17256; 2 ♂, as holotype, -i.1959; 2 ♂, as holotype, -xi.1958; 1 ♀, Etoumbi, -iii.1959 (*T. H. E. Jackson*); 1 ♀, Etoumbi (this specimen in Stempffer coll.); 1 ♀, Mambili Forest, Ouesso, -vi.1959 (*T. H. E. Jackson*); 1 ♀, Kelle, -ii.1963 (*T. H. E. Jackson*). CAMEROUN: 2 ♂, Bitje, wet season, 1913; 2 ♀, Bitje, Ja River, 2000 ft, dry season (*G. L. Bates*); 1 ♂, Bitje, Ja River, 2000 ft, -ix-x-xi. 1911; 1 ♂, Bitje, Ja River, 2000 ft (*G. L. Bates*); 1 ♀, Bitje (this specimen in Stempffer coll.).

***Liptena opaca ugandana* subsp. n.**

(Pl. 1, figs 7, 10; Text-fig. 1d)

Recorded from Uganda only.

♂. *Upperside*. Ground colour brilliant white. On the forewing the costal band is of approximately the same width as the outer marginal band. The discoidal mark of the forewing is not pronounced. Hindwing with the outer marginal band narrower than in the other subspecies. The large discoidal spot of the underside is visible through the wing.

Underside. Forewing with a circular patch of the white ground colour within the brown apical area. The costal band is slightly broader than in typical *opaca*, and a small discoidal mark is present. The discoidal spot of the hindwing is deep brown, oval and large. Other dark markings as in *o. opaca*.

Length of forewing : 16 mm. Palpi black; legs and antennae as in typical *opaca*.

♂ *genitalia*. The subunci differ from those of the other subspecies: they are narrow at the base, broadening midway where they are approximately four times the width of the base, and then tapering off evenly to a sharp point.

♀. Markings as in ♂. Length of forewing : 15 mm.

MATERIAL EXAMINED.

Holotype ♂, UGANDA: 'Mpanga Forest, Mpigi, Apr. 1959, T. H. E. Jackson', dissection no. NHB. 1967-2655, B.M. Type No. Rhop. 17257.

Paratypes. UGANDA: allotype ♀, Katera, Sango Bay, Masaka, -.xi.1954 (*T. H. E. Jackson*), B.M. Type No. Rhop. 17258; 1 ♂, Mambigambo Forest, L. Edward, -.ii.1956 (*T. H. E. Jackson*); 4 ♂, 1 ♀, Bwamba, various dates (*T. H. E. Jackson*); 3 ♂, 2 ♀, Budongo, various dates (*T. H. E. Jackson*); 1 ♂, 1 ♀, W. shores of Vic. Nyanza, Buddu, 3700 ft, 19-25.ix.1911 (*S. A. Neave*); 2 ♀, N.W. shores of Vic. Nyanza, 3800-3900 ft, 12-15.ix.1911 (*S. A. Neave*); 7 ♂, 2 ♀, Kayonza Forest, Kigezi, various dates (*van Someren*); 4 ♂, 3 ♀, Katera Forest, Masaka, various dates (*van Someren*); 1 ♂, Kamengo, 8.ix.1949 (*van Someren*); 1 ♀, Katera, -.viii.1935 (*T. H. E. Jackson*); 1 ♀, Katera Forest, Mbarara, -.xi-xii.1951 (*van Someren*); 1 ♀, Entebbe Forest, Kitinda, -.vii.1951 (*V. G. L. van Someren*); 1 ♀, Nabogabu, -.ix.1935 (*T. H. E. Jackson*); all in BMNH collection. The following paratypes in collection of H. Stempffer: 10 examples, Kayonza Forest, Kigezi; 5 examples, Bwamba; 3 examples, Budongo Forest, Unyoro; 1 example, Mpigi; 3 examples, Katera; 7 examples, Kagera; all collected by the late T. H. E. Jackson.

Liptena opaca sankuru subsp. n.

(Pl. 1, figs 8, 11; Text-fig. 3)

Recorded from Cameroun and Zaire.

♂. *Upperside*. Ground colour brilliant white. Forewing markings similar to those of *o. ugandana*; the paratypes of *o. sankuru* have a broader outer marginal band than the holotype. Hindwing markings resemble those of *o. ugandana*, the discoidal spot of the underside being visible through the wing; the dark outer marginal band is tapered at the apex and at the anal angle.

Underside. Forewing differs from that of *o. ugandana* in having the pale patch within the dark apical area of lesser extent; the dense discoidal spot on the hindwing is smaller.

Length of forewing : ♂ 15.5 mm. Legs, palpi and antennae as in *o. ugandana*.

♂ *genitalia*. Similar to those of *o. ugandana*, but the saccus more rounded at the extremity, the ventral process of the valva more slender. The subunci are more slender than those of *o. ugandana*. The aedeagus is shorter and stouter than in *o. opaca*.

♀. Markings as in ♂. Length of forewing : 15 mm.

MATERIAL EXAMINED.

Holotype ♂, ZAIRE: 'Sankuru, Katako-Kombe, 18.9.1952, Dr M. Fontaine', dissection no. Stempffer 4697 (in Stempffer coll.)

Paratypes. CAMEROUN: allotype ♀, Bitje, 2000 ft, wet season, 4.v.1912 (*G. L. Bates*), B.M. Type No. Rhop. 17294; 1 ♂, Bitje 13°N. 12°E., wet season, 1926 (*G. L. Bates*) dissection no. NHB. 1959-2716. ZAIRE: 2 ♂, Katako-Kombe, (*Dr M. Fontaine*) (these specimens in Stempffer coll.); 1 ♂ Takalu, W. of L. Albert, -iii-, dissection no. NHB, 1958-2182.

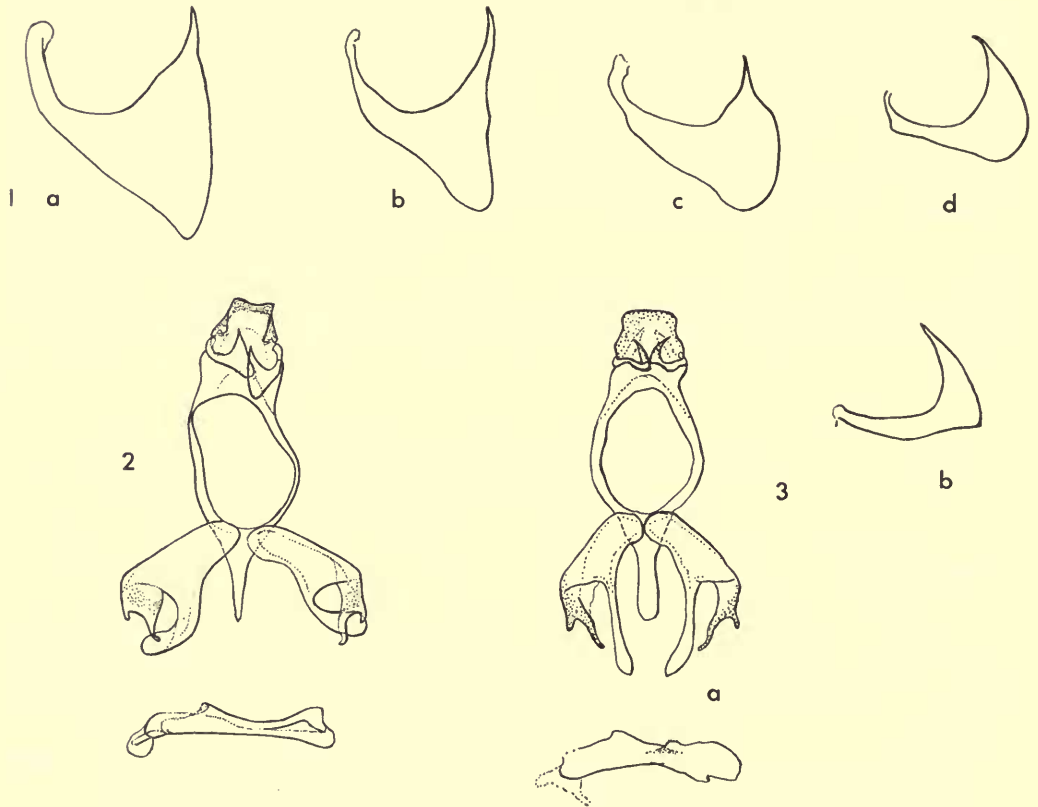


FIG. 1. Subunci of *Liptena opaca* subspecies: (a) *opaca*, (b) *gabunica*, (c) *centralis*, (d) *ugandana*.

FIG. 2. *Liptena opaca opaca* (Kirby), ♂ genitalia.

FIG. 3. *Liptena opaca sankuru* subsp. n., (a) ♂ genitalia, (b) subuncus, enlarged.

Liptena albomacula Hawker-Smith

(Pl. I, figs 9, 12; Text-fig. 4)

Liptena albomacula Hawker-Smith, 1933 : 7, ♂♀. 1 ♂, 1 ♀ types, ZAIRE: Katanga, vii. 1925 (BMNH) [examined].

Recorded from Cameroun, Zaire and Uganda.

The types are in the BMNH. The ground colour is pure white. On the forewing upperside is a broad brown costal band extending across the apex and down the outer margin to the tornus. The hindwing bears a brown outer marginal band. On the underside the costal and outer marginal bands are repeated and at the apex of the forewing a patch of white ground colour is present within the brown marking, as in *opaca ugandana*. The hindwing is marked as on the upperside but in addition there is a prominent darker brown discoidal spot. The forewing measures barely 15 mm. Legs orange; palpi brown; antennae black flecked with white, the club tipped with orange.

♂ *genitalia*. Uncus crescentic with a weakly convex distal margin; tegumen wide; subunci angled and dilated in their central part. Vinculum moderately broad with a short saccus. Valvae rectangular, the dorsal process with the basal half of moderate width tapering to a fairly fine rounded tip; there is no hooked projection like that of *opaca opaca*; the ventral process is longer than the dorsal, and slender. Aedeagus large, robust and straight with a strongly dilated distal portion.

MATERIAL EXAMINED.

No material other than the type-specimens was available.

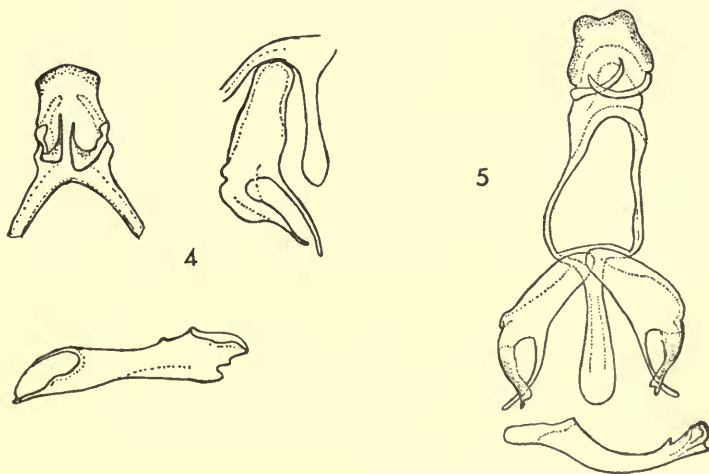


FIG. 4. *Liptena albomacula* Hawker-Smith, ♂ genitalia.

FIG. 5. *Liptena titei* sp. n., ♂ genitalia.

Liptena titei sp. n.

(Pl. 1, figs 13, 16; Text-fig. 5)

We have pleasure in naming this species after our colleague Mr G. E. Tite. *L. titei* is similar in facies to *opaca ugandana* but the male genitalia more closely resemble those of *albomacula*.

♂. *Upperside*. Ground colour light cream—almost white. Forewing with a broad blackish brown costal band showing a slight projection at the end of the cell. The outer marginal band is somewhat wider. Hindwing with an outer marginal band and a few scales around the discoidal vein, blackish brown. The extent of the discoidal marking is individually variable.

Underside. As upperside, but the outer marginal band on the forewing is narrower. This species differs from *opaca ugandana* by the almost complete absence of the pale patch at the apex of the forewing within the brown coloration. On the hindwing, in addition to the broad outer marginal band, is a large discoidal spot.

Length of forewing: 16 mm. Legs orange; palpi dark brown, antennae black, flecked with white, the whole of the club orange.

♂ *genitalia*. Uncus elongated, slightly broader at base, the distal margin weakly concave; tegumen large. Subunci long and uniformly slender. Vinculum moderately broad with a long saccus that broadens towards the free end. Valvae rectangular, the dorsal process excised at the tip, the ventral process long and slender. Aedeagus strongly curved with a projection on both the dorsal and ventral surfaces just before the tip, which is bilobed.

♀. The costal and outer marginal bands on the upperside tend to be narrower than in the ♂. Length of forewing as in the ♂.

MATERIAL EXAMINED.

Holotype ♂, NIGERIA: 'Obubra, Abakaliki Prov., Nov. 1960, T. H. E. Jackson', dissection no. NHB. 1967-2668, B.M. Type No. Rhop. 17259.

Paratypes. NIGERIA: allotype ♀, as holotype, B.M. Type No. Rhop. 17260; 1 ♂, Eleala, Pt. Harcourt, -xi.1958 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Bassa Prov., Cator coll.; 1 ♂, Oban, -i.1921, Cator coll.; 1 ♂, Akamkpa, Calabar Prov., -x.1958 (*T. H. E. Jackson*); 2 ♂, 1 ♀, Ikom, Ogoja Prov., various dates; 1 ♂, Adiabo,, -v.1920, Cator coll. CAMEROUN: 1 ♂, Mamfe, -ix.1956 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Mamfe, -xi.1956 (*T. H. E. Jackson*); 1 ♀, Mamfe, -xii.1956 (*T. H. E. Jackson*); 3 ♂, Johann Albrecht's Hohe Station 1896 (*L. Conradt*) Oberthür coll.; 1 ♀, Kumba, -v.1956 (*T. H. E. Jackson*); 1 ♀, Mile 29 Victoria-Kumba, -iv.1955 (*T. H. E. Jackson*). IVORY COAST: 1 ♂, Tiassale, Abidjan, -viii.1965 (*T. H. E. Jackson*).

Liptena griveaudi Stempffer

(Pl. 1, figs 14, 17; Text-fig. 6)

Liptena griveaudi Stempffer, 1969 : 937, figs 20-22, ♂♀. Holotype ♂, IVORY COAST: Anguédédou (*P. Griveaud*) (Stempffer coll.) [examined].

This species is quite different from the other *Liptena* species that inhabit this region. The external characters are distinctive and the male genitalia exhibit an unusually shaped valva. Recorded from Ivory Coast only.

The ground colour is white on both surfaces and the sooty markings have a rather smudged appearance. On the *upperside* the costal band of the forewing is so broad that it covers almost the whole of the discoidal cell. The outer marginal band is only a little broader than the costal band. The discoidal marking is large and square, but is incorporated into the costal band. On the hindwing the outer marginal band is moderately narrow and does not reach the anal angle. The discoidal marking is large and squarish, as on the forewing; however, the oval outline of the discoidal spot on the underside, which is larger, is visible through the wing.

On the *underside* the basal half of the costal band is not as broad as on the upperside. The outer marginal band is narrower towards the tornus than on the upperside. The discoidal patch is more pronounced. Hindwing as upperside, but the discoidal spot even larger.

♂ *genitalia*. Uncus rectangular with a blunt median point, the lateral angles rounded; tegumen rather narrow. Subunci short, only very slightly curved, and hooked towards the tip. Vinculum slender, prolonged by a strongly spatulate saccus. Valvae very distinctive, the two processes are widely separated distally, both processes semi-membranous, the dorsal one terminating in a sharp point, the ventral process truncated with a small tooth near the apex. Aedeagus long, cylindrical and curved; on the dorsal surface a small tooth is present just before the extremity.

MATERIAL EXAMINED.

♂ holotype, data given above. Allotype ♀, IVORY COAST: Adiopodoumé (*P. Griveaud*); other paratypes as cited in original description.

Liptena confusa Aurivillius

(Pl. I, figs 15, 18; Text-fig. 7)

[*Larinopoda muhata* Dewitz; Grose-Smith & Kirby, 1887 : 1, pl. 2, figs 3, 4. Misidentification.]
Liptena confusa Aurivillius, 1899 : 276. Holotype ♀, CAMEROUN (possibly in BMNH, see below).

Grose-Smith & Kirby (1887) described an insect they believed to be the female of *Larinopoda muhata* Dewitz (1886 : 428, pl. 2, figs 6, 6a), but it was not this

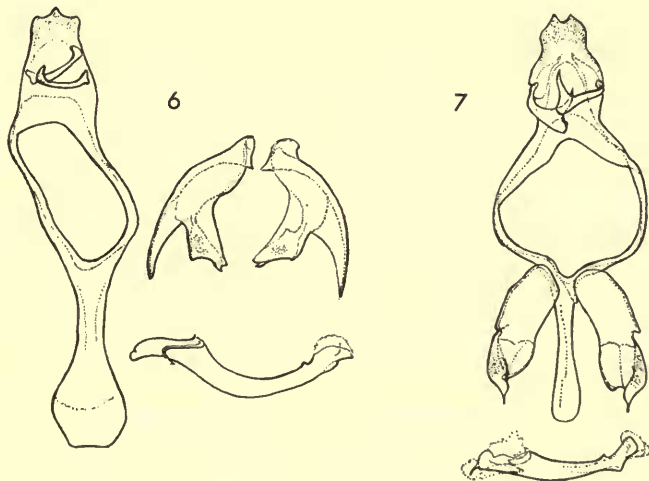


FIG. 6. *Liptena griveaudi* Stempffer, ♂ genitalia.

FIG. 7. *Liptena confusa* Aurivillius, ♂ genitalia.

species. The misalliance was discovered by Aurivillius who then renamed the female *confusa*. In the BMNH collection is a female specimen from Grose-Smith's collection which could possibly be the type. In facies it agrees with the figures given by Grose-Smith & Kirby (1887: pl. 2, figs 3, 4). The labels read 'Camerouns' 'Ex Grose-Smith 1910'. Three males in the BMNH collection agree well with this female, and possess genitalia distinct from those of any other species of white *Liptena*.

Recorded from Cameroun only.

♂. *Upperside*. Ground colour white—markings dark brown. Forewing with a broad, costal band, the discoidal mark hidden within it. Outer marginal band of approximately the same width as the costal band. Hindwing with an outer marginal band of similar width and a small discoidal spot.

Underside. Ground colour white—brown markings less densely scaled than on upperside. Forewing with both bands narrower than those of the upperside; the outer marginal band does not quite reach the tornus. The discoidal mark is more noticeable and there is a small projection from the costal band just beyond it. Hindwing with the outer marginal band slightly narrower than on upperside and prominent oval discoidal spot, larger than that of the upperside.

Length of forewing: 16 mm. Legs orange with some brown scaling, the unguulae brown; palpi black; antennae black, flecked with white; we have no examples that have a club.

♂ *genitalia*. The distinctive uncus is rather elongate and conical with a rounded excision at the apex. Tegumen oval. Subunci curved, narrow at base, reminiscent of a cobbler's last but with a more exaggerated heel. Vinculum broad, prolonged by a broad angular saccus. Valvae rectangular, the dorsal process broad with a finger-like apex; the ventral process very slender. Aedeagus long and gently curved with a small tooth on the dorsal surface, and a larger blunt projection on the ventral surface.

MATERIAL EXAMINED.

CAMEROUN: 1 ♀, 'Camerouns', ex Grose-Smith, 1910; 1 ♂, Mamfe, -x.1956 (*T. H. E. Jackson*); 2 ♂, Mile 29 Victoria-Kumba, -iv.1965 (*T. H. E. Jackson*); 1 ♀, Bitje, dry season, 1913; 1 ♀, Mamfe, -xii.1956 (*T. H. E. Jackson*).

Liptena ouesso sp. n.

This new species found in Cameroun and Congo (Brazzaville) is noticeably different from other species of *Liptena* that have a dark outer marginal band on hindwing upperside, because it has a cream ground colour.

In facies this species is quite like a small example of *titei*; however, the male genitalia differ widely. The subunci of *ouesso* are unusual, the only other forms with similar subunci are *rochei* and *submacula tringa*. Externally the cream ground colour easily distinguishes *ouesso* from *s. tringa*, which has a white ground and lacks the pale apical patch on the forewing underside.

Liptena ouesso ouesso subsp. n.

(Text-figs 8, 9b)

♂. *Upperside*. Ground colour light cream—markings blackish brown. Forewing with the broad costal band invading the cell; confluent with the band is a small discoidal streak. The apical and outer marginal areas are broadly blackish brown, the outer marginal band

narrows slightly at the tornus. Hindwing showing a broad outer marginal band of approximately 3 mm width, tapering to a point at the anal angle. The discoidal spot of the underside is visible through the wing. Fringes of all wings blackish.

Underside. Ground colour whiter than that of the upperside—the bands dark brown. Forewing with the costal band slightly narrower than on the upperside. The light ground colour breaks through the dark apical coloration as an indistinct whitish patch. Outer marginal band somewhat narrower than that of upperside. Hindwing with the blackish discoidal spot prominent. Outer marginal band as on upperside, but the dark coloration not as intense. There is a pair of black marginal lines divided by a fine white line on all wings. Fringes as upperside.

Length of forewing: 14 mm. Legs orange with black ringing on the tarsi; palpi blackish; antennae black with white lateral flecking, the club black—dull orange below and at the tip.

♂ *genitalia.* Uncus crescentic with a straight distal margin, produced at the angles; tegumen oval; the distinctive subunci are in the form of a horizontal letter 'Y', the lower arm of the Y more slender than the upper, and slightly upcurved. Vinculum of moderate width with a long saccus. Valvae rectangular; the dorsal process of average width at the base, then narrowing sharply to terminate in a blunt point; the ventral process very slender. Aedeagus longer than the valva, slender in the central part and dilated at the tip. It is distinct from that of any other species in the group.

♀. As the ♂ but sometimes larger (length of forewing: 17 mm).

MATERIAL EXAMINED.

Holotype ♂, CONGO (BRAZZAVILLE): 'Republic of Congo Brazzaville, Ouesso, Ketta Forest, november december '59, T. H. E. Jackson.'

Paratypes. CONGO (BRAZZAVILLE): allotype ♀, as holotype (both in Stempffer coll.); 2 ♂, 3 ♀, Kelle (*T. H. E. Jackson*) (in Stempffer coll.); 1 ♀, Kelle, -x.1963 (*T. H. E. Jackson*); 1 ♀, Etoumbi, -x.1960 (*T. H. E. Jackson*). CAMEROUN: 1 ♂, Bitje, early May & June, wet season; 1 ♂, Ja River (*G. L. Bates*).

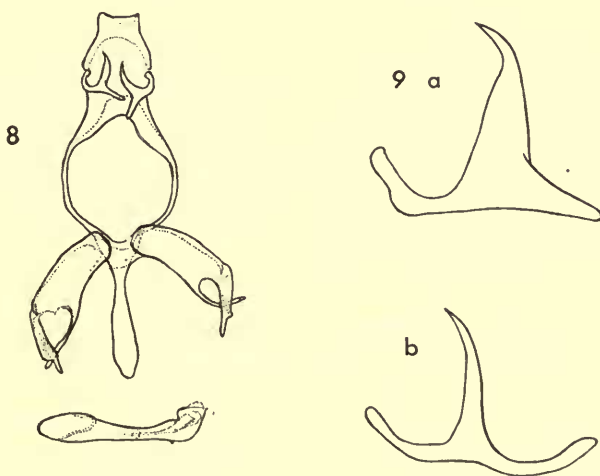


FIG. 8. *Liptena ouesso ouesso* sp. n., ♂ genitalia.

FIG. 9. Subunci of (a) *Liptena ouesso mayombe* subsp. n., (b) *L. ouesso ouesso* subsp. n.

***Liptena ouesso mayombe* subsp. n.**

(Pl. 1, figs 19, 20; Text-fig. 9a)

This subspecies differs from the nominate subspecies by its larger size and heavier dark markings. The cream ground colour is deeper than in associated species.

♂. *Upperside*. Ground colour creamy white, the blackish brown costal band and outer marginal bands as in *o. ouesso* but of greater width. On the hindwing the discoidal spot of the underside is visible through the wing; in addition the paratype ♂ shows some brown scaling on the upperside at the discoidal vein.

Underside. Ground colour whiter than that of the upperside. Forewing with the brown costal band very broad, covering almost one-half of the discoidal cell. At the apex of the forewing is a white patch almost enclosed within the brown markings; this is larger than in the nominate race. The outer marginal band is narrower than that of the upperside. On the hindwing the discoidal spot is massive, much larger and rounder than that of *o. ouesso*. The outer marginal band is of the same width as that of the upperside.

Length of forewing: 16 mm. Legs and palpi as in *o. ouesso*; antennae black with white lateral flecking, the club tipped with dull orange.

♂ *genitalia*. Differs from *o. ouesso* in the form of the subunci which are more dilated centrally and have a shorter apophysis.

♀. Unknown.

MATERIAL EXAMINED.

Holotype ♂, CONGO (BRAZZAVILLE): 'Mayombe, M'vouti, Rep. du Congo, Jan. 1962, T. H. E. Jackson', dissection no. NHB. 1967-2620, B. M. Type No. Rhop. 17261.

Paratype ♂, as holotype, dissection no. NHB. 1967-2621, B. M. Type No. Rhop. 17262.

***Liptena submacula* Lathy**

Liptena submacula Lathy, 1903 : 196, pl. 8, fig. 6.

L. submacula is distributed through western Africa from Sierra Leone eastwards to Nigeria. In Nigeria the range of *s. submacula* overlaps the range of *o. opaca*; it is distinguished from *o. opaca* by the absence of discoidal markings on the hindwing upperside; the discoidal marking on the hindwing underside is also smaller in *s. submacula* than in *o. opaca*, but the structural differences in the male armature provide definite characters for separation, the difference between the uncus and valvae of the species being quite striking.

***Liptena submacula submacula* Lathy**

(Pl. 2, figs 21, 24; Text-fig. 10)

Liptena submacula Lathy, 1903 : 196, pl. 8, fig. 6, ♀. Holotype ♀, NIGERIA: Ogruga (BMNH) [examined].

The female holotype of *submacula* is in the BMNH and unfortunately is rather worn. The series in the BMNH is from Nigeria. A male neallotype is described here.

♂. *Upperside*. Ground colour white, markings blackish brown. Forewing with the broad costal band invading the cell, curving across to form an even wider outer marginal band. Hindwing with a broad outer marginal band. The discoidal spot of the underside is visible through the wing.

Underside. Coloration as on upperside. Forewing with the costal band as on the upperside but the outer marginal band narrower than that of the upperside. Hindwing outer marginal band of the same width as on upperside. The hindwing shows a prominent discoidal spot.

Length of forewing: 15 mm. Legs orange with some black ringing, some orange coloration present on the underside of the thorax also; palpi black; antennae black, flecked with white, the club tipped with orange.

♂ *genitalia*. Uncus bifid, the two parts separated by a deep, rounded depression; the lateral angles are acute. Tegumen trapezoidal. Subunci long, curved and slender. Vinculum rather narrow, with a long saccus. Valvae rectangular; the dorsal process broad in its basal two-thirds and tapering sharply to end in a point; the ventral process very narrow and flexible. Aedeagus with a tooth on the dorsal surface and a larger one on the ventral surface near the tip.

♀. The females of *submacula* have narrower outer marginal bands on all wings than the males.

The range of *s. submacula* overlaps that of *titei* and appears to abut on to that of *s. tringa*; however, it is easily separated from both due to the absence of discoidal spots on the upperside.

MATERIAL EXAMINED.

♀ holotype, data given above.

NIGERIA: ♂ neallotype, 'Oshodi, Lagos Distr., April 1955, T. H. E. Jackson',

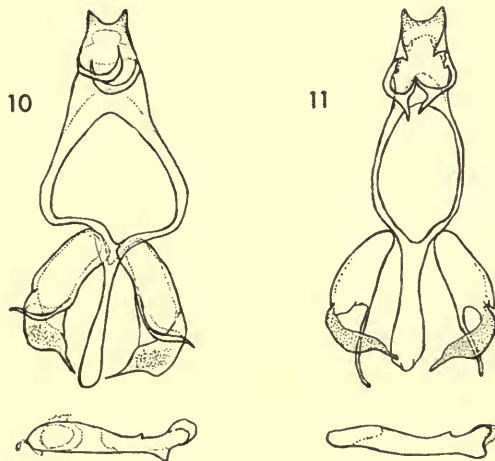


FIG. 10. *Liptena submacula submacula* Lathy, ♂ genitalia.

FIG. 11. *Liptena submacula tringa* subsp. n., ♂ genitalia.

dissection no. NHB 1967-2636, B.M. Type No. Rhop. 17263; 3 ♂, 2 ♀, Oshodi, Lagos Distr., iv. 1955 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Warri, Niger C.P., -v.1897 (*Dr Roth*); 1 ♂, Warri, Niger C.P., -vi.1897 (*Dr Roth*); 1 ♂, Warri, Niger C.P., -x.1897 (*Dr Roth*); 1 ♂, Lagos (*Dr P. Roche*); 2 ♂, 1 ♀, Gambari Forest, 13.viii.1969 (*T. B. Larsen*); 1 ♂, Omo Forest, end of May 1969 (*T. B. Larsen*); 1 ♂, Olokemeji, 24.viii.1969 (*T. B. Larsen*); 1 ♂, Lagos (*Maloney*); 1 ♀, Mamu Awka, Onitsha Prov., -i.1959 (*T. H. E. Jackson*); 1 ♀, Mamu Awka, Onitsha Prov., -iii. 1960 (*T. H. E. Jackson*); 1 ♀, northern Nigeria, Maidugari, 6.i.1945; 1 ♀, western Nigeria, Elesha, -viii.1935 (*C. L. King*); 1 ♀, southern Nigeria, Osogbo, 25.iv.26.

Liptena submacula tringa subsp. n.

(Pl. 2, figs 22, 25; Text-fig. 11)

This subspecies is recorded from Ivory Coast and Ghana. It is easily separated from *griveaudi*, also from Ivory Coast, by the smaller discoidal marks on all wings. *L. s. tringa* might be confused with *titei*, which is found in Ivory Coast, but it tends to have narrower marginal bands than *titei* and a larger discoidal spot on the underside hindwing. *L. s. tringa* differs from *s. submacula* by the following external characters: on the forewing upperside the costal band of *s. tringa* covers almost the entire cell, whereas in *s. submacula* it is not as extensive; discoidal marks are present on the upperside of all wings of *s. tringa*, whereas *s. submacula* rarely shows any discoidal markings on the upperside.

♂. *Upperside*. Ground colour white - markings blackish brown. Forewing with the costal band very broad, extending from the inner margin at the base of the wing and covering the whole of the discoidal cell. There is a small discoidal streak. Outer marginal band of nearly uniform width, approximately 4 mm. Hindwing showing a broad outer marginal band and a light discoidal mark; the discoidal spot of the underside visible through the wing. Fringes blackish brown.

Underside. Ground colour white, the brown markings less densely scaled than those of the upperside. Forewing with the costal and outer marginal bands narrower than on the upperside. A pair of black marginal lines divided by a fine white line is present on all wings. Hindwing with the outer marginal band only slightly narrower than on the upperside. The discoidal spot is oval and very prominent.

Length of forewing: 15 mm. Legs orange, the ungulae black on the meso- and meta-thoracic legs; palpi black; antennae black, flecked with white, the club tipped with orange.

♂ *genitalia*. As in typical *submacula* except for the subunci which are in the form of a shallow, horizontal letter 'Y'.

♀. Unknown.

MATERIAL EXAMINED.

Holotype ♂, IVORY COAST: 'Abagourou, Côte d'Ivoire, Apr. 1967, T. H. E. Jackson', dissection no. NHB. 1967-2634, B.M. Type No. Rhop. 17264.

Paratypes. GHANA: 1 ♂, Ashanti, -iv.1908 (*G. C. Dudgeon*), dissection no. NHB. 1959-2167, B.M. Type No Rhop. 17265; 1 ♂, Ashanti, -iii.1901, dissection no. NHB. 1959-2166, B.M. Type No. Rhop. 17266.

Liptena submacula maesseni subsp. n.

(Pl. 2, figs 23, 26; Text-fig. 12)

Known only from Ghana.

♂. *Upperside*. Ground colour white - markings dark brown. Forewing with the costal band of uniform width, enveloping the fine discoidal streak. The outer marginal band broader than in *s. submacula*, approximately 4 mm in width at the tornus. Hindwing with a broad outer marginal band. The discoidal spot of the underside is visible through the wing.

Underside. Colouring as on upperside. Forewing with the costal band and discoidal streak as on upperside, but the outer marginal band narrower than on upperside. A pair of fine, black, outer marginal lines separated by a fine paler line is present on all wings. Hindwing with the outer marginal band of the same width as that of the upperside. The discoidal spot very dense and precise, oval, and much larger than in *s. submacula*. The humeral lobe and the anal fold are edged with orange.

Length of forewing: ♂ 17 mm. Legs orange with some black ringing, some orange coloration present on the underside of the thorax also; palpi black; antennae black, flecked with white, the club tipped with orange.

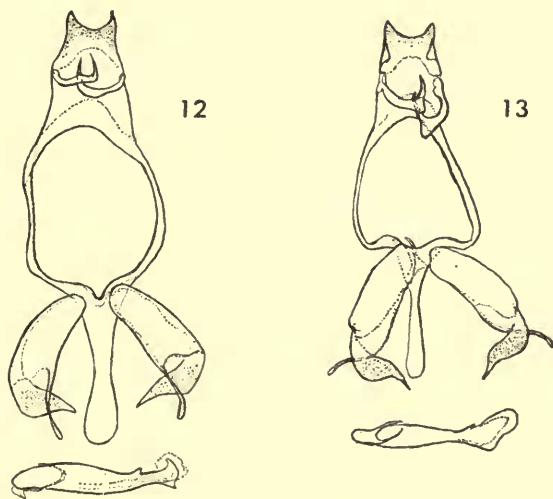
♂ *genitalia*. Differ from *s. submacula* only in the subunci which are more curved and swollen in their middle part.

♀. Markings as in ♂. Length of forewing: 13 mm.

MATERIAL EXAMINED.

Holotype ♂, GHANA: 'Ho, 3 January 1954, Th. Maessen leg', dissection no. 6315 (Stempffer).

Paratypes. GHANA: allotype ♀, Kpandu, 30.iii.1950 (*Th. Maessen*) (holotype and allotype in Stempffer coll.); 1 ♂, Pampavie, 5.viii.1961 (*Th. Maessen*), dissection no. 6156 (Stempffer) (in BMNH); 3 ♂, 2 ♀, Likpe, various dates (*Th. Maessen*) (in MRAC, Tervuren); other specimens in Maessen coll.

FIG. 12. *Liptena submacula maesseni* subsp. n., ♂ genitalia.FIG. 13. *Liptena submacula liberiana* subsp. n., ♂ genitalia.

Liptena submacula liberiana subsp. n.

(Pl. 2, figs 27, 30; Text-fig. 13)

Recorded from Ivory Coast, Liberia and Sierra Leone.

L. s. liberiana is easily separated from *s. tringa*, the more easterly subspecies of *submacula*, *s. tringa* being a smaller insect and having the dark costal band obscuring the whole of the cell of the forewing upperside; in *s. tringa* the outer marginal band of the forewing is considerably narrower on the underside than on the upperside, which in *s. liberiana* is not true to such an extent; *s. liberiana* also bears a much larger discoidal spot on the underside hindwing.

L. titei is close in facies but differs in having the whole of the antennal club orange, whilst in *s. liberiana* it is black, tipped with orange. The discoidal spot on the underside hindwing in *s. liberiana* is larger and the male genitalia differ markedly.

From *griveaudi*, which occurs in Ivory Coast, it is distinguished by the absence of the large discoidal marks on the upperside which make *griveaudi* so striking.

♂. *Upperside*. Ground colour white—markings dark brown. Forewing with a broad brown costal band which obscures the greater part of the cell at the base, and extends to the inner margin. There is a minute discoidal streak confluent with the costal border. The inner edge of the outer marginal band is rather straight, and the band itself a little broader than the costal band. Hindwing with the discoidal spot of the underside clearly visible through the wing. The outer marginal band is approximately 3mm broad, tapering towards the anal angle.

Underside. As upperside, except that the outer marginal band of the forewing is less broad, and tapers off towards the tornus. The discoidal spot on the hindwing is very large and oval.

Length of forewing: 14.5 mm. Legs orange, the ungulae black; palpi black; antennae black with white flecking, the club black and tipped with orange.

♂ *genitalia*. Uncus trapezoidal, the distal margin bearing a deep, rounded excision. Subunci curved, in the shape of a cobbler's last like those of *confusa*. Tegumen oval. Vinculum narrow with a long spatulate saccus. Valvae and aedeagus as in the nominate race.

♀. Larger than the ♂ (length of forewing: 17 mm), but with similar markings.

MATERIAL EXAMINED.

Holotype ♂, LIBERIA: 'Kpaine, 1400 ft, (7°10' N. 9°7' W.), 25.2.1954, Dr W. Peters leg,' dissection no. 4506 Stempffer, B. M. Type No. Rhop. 17267.

Paratypes. LIBERIA: 2 ♂, as holotype, 18.iii.1954. IVORY COAST: 1 ♂, Tiassale, Abidjan, -viii.1965 (*T. H. E. Jackson*); 1 ♀, Tiassale, Abidjan, -x.1965 (*T. H. E. Jackson*); 3 ♂, 5 ♀, Tiassale (*T. H. E. Jackson*) (Stempffer coll.); 1 ♂, Ivory Coast, Cramer, 1919; 2 ♀, Bayota Forest, Gagnoa, 1966 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Bayota Forest, Gagnoa (*T. H. E. Jackson*) (Stempffer coll.); 2 ♀, Bingerville, 1915 (*G. Melou*); 1 ♀, Issia (*T. H. E. Jackson*) (Stempffer coll.); 1 ♂, 1 ♀, Tiassale, -ix.1967 (*T. H. E. Jackson*); 1 ♂, Danane, Mt. Nimba, -xi.1967 (*T. H. E. Jackson*). SIERRA LEONE: allotype ♀, Moyamba, 11.vi.1903, Cator coll., B. M. Type No. Rhop. 17268; 5 ♂, 1 ♀, as allotype, various dates, Cator coll.; 1 ♂, 1 ♀, Moyamba, Adams coll.; 1 ♀, Moyamba, 17.v.1903, Bethune-Baker coll.; 1 ♂, Moyamba, 21.x.1903, Cator coll.; 1 ♂, Baima, 22.iv.1903, Cator coll.

Liptena fatima (Kirby)

(Pl. 2, figs 28, 29, 31, 32; Text-fig. 14)

Tingra fatima Kirby, 1890 : 268, ♂ ♀. ♂, ♀ syntypes, CAMEROUN (probably destroyed).*Tingra fatima* Kirby; Grose-Smith & Kirby, 1891 : pl. 15, figs 8, 9, ♀.

Specimens in the BMNH collection are from Nigeria, Cameroun, Fernando Po, Gabon, Congo (Brazzaville) and Zaire. The specimens from Nigeria differ from those from other parts of the range by their smaller size, paler ground colour, reduced apical marking and fainter discoidal spots. Intermediate examples exist.

♂ *genitalia*. Very similar to that of *alluaudi* and *albicans*. Uncus broadly crescentic with a small excision at the centre of the distal margin. Subunci long, slender with incurved apices, occasionally furnished with a projection on the lower margin near the base. Vinculum narrow with a long spatulate saccus. Valvae triangular, the dorsal process directed downward, the ventral process large and broadly rounded. Aedeagus small, parallel-sided with a small tooth midway along the ventral margin.

♀. Markings as in ♂.

MATERIAL EXAMINED.

NIGERIA: 1 ♂, Onitsha, Awka Mamu Forest, -iii.1959 (*T. H. E. Jackson*); 1 ♂, Akpabuyo, -i.1921, D. Cator coll.; 1 ♀, Akpabuyo, -vii.1920, Cator coll.; 1 ♂, 1 ♀, Eket, 25.iii.1920, D. Cator coll.; 1 ♀, Eket, 20.iii.1920, D. Cator coll.; 2 ♂, Oban, -v.1920, D. Cator coll.; 1 ♀, Oban, -i.1921, D. Cator coll.; 1 ♂, Uwet, -v.1920, D. Cator coll.; 1 ♂, Uwet, -x.1920, D. Cator coll. CAMEROUN: 11 ♂, 2 ♀, Johann Albrecht's Hohé Station, 1896 (*L. Conradt*); 2 ♂, Barombi, Grose-Smith coll.; 1 ♂ Sakbayeme (*G. Schwab*); 2 ♂, Mile 29 Victoria-Kumba, -iii.1955 (*T. H. E. Jackson*); 2 ♂, Mamfe, -xi.1956, (*T. H. E. Jackson*); 2 ♂, Bitje, Ja River, -iii.1912 (*G. L. Bates*); 1 ♀, Bitje, -iii.- (*G. L. Bates*); 1 ♀, Bitje, -iv-v.1909, wet season, Adams coll.; 1 ♂, Bitje, wet season, -iv-v.1909; 1 ♂, 1 ♀, Bitje, Ja River, 2000 ft, wet season, -iv.v.1912, (*G. L. Bates*); 2 ♂, Bitje, Ja River, 3° N., 12° E., wet season, 1926 (*G. L. Bates*); 1 ♂, Bitje, Ja R., -iv-vi.1910, lesser rains (*G. L. Bates*); 1 ♂, 2000 ft, smaller rains, (*G. L. Bates*); 1 ♀, Bitje, wet season, 1913; 4 ♂, 1 ♀, Bitje, Ja River, early May & June, wet season (*G. L. Bates*); 1 ♀, Bitje, -vi-vii.1909, dry season, Adams coll.; 1 ♀, Bitje, -ix.'08, Adams coll.; 2 ♂, 2 ♀, Bitje, 2000 ft, -ix-x-xi.1911; 3 ♂, 1 ♀, Bitje, Ja River, 2000 ft, -x-xi.1912 (*G. L. Bates*); 5 ♂, Bitje, Ja River, 2000 ft, -x-xi.1913, wet season (*G. L. Bates*); 1 ♂, Bitje, 2000 ft, -xi.1909, Bethune-Baker coll.; 2 ♂, Bitje, dry season, 1913; 3 ♂, 1 ♀, Bitje, Ja River, dry season, (*G. L. Bates*); 2 ♀, Bitje, 2000 ft, (*G. L. Bates*); 3 ♂, Bitje, (*G. L. Bates*); 1 ♂, 1 ♀, Bitje, Ja River, 2000 ft, 1915 (*G. L. Bates*). FERNANDO PO: 1 ♂ Hewitson coll. GABON: 1 ♀, Kuilu, 1892 (*Mocquerys*); 1 ♂, Ogowe, Bethune-Baker coll.; 1 ♂, Ogowe, Godman & Salvin coll.; 2 ♂, Lake Asebbe, Fernan Vaz, -i.'08 (*Dr Ansorge*); 2 ♂, 1 ♀, Gabon, Rothschild coll. CONGO (BRAZZAVILLE): 1 ♂, Etoumbi, -xi.1958 (*T. H. E. Jackson*); 1 ♀, Ouesso Forest, Ketta, -xi.1959 (*T. H. E. Jackson*); 1 ♂, Mambili Forest, Ouesso, -vi.1959 (*T. H. E. Jackson*). ZAIRE: 1 ♀, Beni, 4000 ft, -x.1946 (*T. H. E. Jackson*); 1 ♂, Beni, Ituri, 4000 ft,

-.viii.1947 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Irumu, Ituri, 4000 ft, -.vi.1947 (*T. H. E. Jackson*); 1 ♂, Upper Kasai District (*P. Landbeck*); 1 ♂, Katanga; 2 ♂, Osa-Lowa Watershed, -.viii.1921 (*T. A. Barns*); 2 ♂, West Semliki Valley, 3500 ft, -.vi.1924, forest (*T. A. Barns*); 1 ♀, Congo Forest, -.vii.1907 (*A. F. R. Wollaston*).

Liptena albicans Cator

(Pl. 2, figs 33, 36; Text-fig. 15)

Liptena albicans Cator, 1904 : 76, ♂♀. Holotype ♂, SIERRA LEONE: Kholifa, 9.xii.1903 (BMNH, dissection no. NHB 1953-1080) [examined].

Recorded from Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana and Nigeria. The expanse of the wings of the male holotype is 28 mm, the forewing length 14 mm; the wing-expanse of the female allotype is 31 mm and the forewing length 15 mm. The types were taken *in copula*.

The male genitalia of *albicans* and *alluandi* are rather similar but the two species are easily separated on their external characters. *L. albicans* has the same ground colour as *alluandi* but has the apical patch much larger.

L. albicans could be confused with the very lightly marked Nigerian specimens of *fatima*; however, these are larger and always possess the discoidal spots – or at least a vestige of them – but these spots are never found in *albicans*. Also, *albicans* is much whiter, does not have the orange scaling at the base of the wings, but has more brown coloration at the base of the costa. The male genitalia are similar.

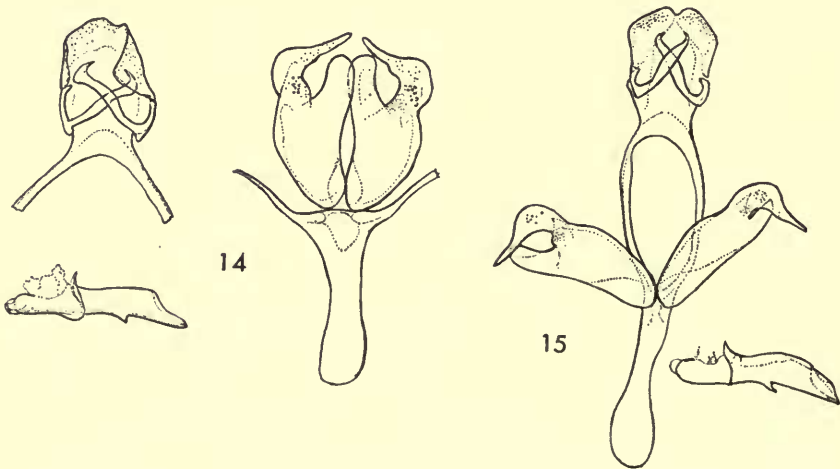


FIG. 14. *Liptena fatima* (Kirby), ♂ genitalia.

FIG. 15. *Liptena albicans* Cator, ♂ genitalia.

L. albicans is easily separated from *decipiens* by its whiter ground colour and because the form and extent of the apical patch differs. In *decipiens* the legs are black, whereas those of *albicans* are orange with some brown scaling.

In *albicans* and *augusta* the apical patch of the forewing is similar in extent, but as the ground colour of *augusta* is bright white contrasting with the dull cream of *albicans*, the two species are easily distinguishable. In addition, *augusta* has the costa brown throughout its length. The male genitalia differ widely, especially the valvae.

♂ *genitalia*. Differs from *alluaudi*, to which it is closest, by the following characters: subunci a little shorter and slightly swollen in the middle; saccus usually longer, valvae narrower.

MATERIAL EXAMINED.

♂ holotype, data given above.

GUINEA: 1 ♂, Massadou, near Macenta, 1600 ft, 13-17.v.1926 (*C. L. Collenette*). SIERRA LEONE: ♀ allotype, data as holotype; 1 ♂, Kholifa, 10.vi.1903, Bethune-Baker coll.; 22 ♂, 12 ♀, Kholifa, -xii.1903, various collections; 1 ♂, Kholifa, -xii.1902, ex Oberthür coll.; 2 ♀, -i.1901, ex Oberthür coll.; 1 ♂, 1 ♀, -ii.1901, ex Oberthür coll.; 1 ♀, 12.vii.1903, ex Oberthür coll.; 2 ♂, -i.1907 (*G. C. Dudgeon*); 1 ♂, Baranga, ii.iv.1903, Bethune-Baker coll.; 3 ♂, Baranga, 19.vi.1903, ex Oberthür coll.; 1 ♂, Baranga 20.vi.1903, D. Cator coll.; 1 ♂, Baranga, 20.vi.1903, Bethune-Baker coll.; 1 ♂, Baranga, 1903, Adams bequest; 1 ♂, Fula Wusu, 17.iv.1903, Bethune-Baker coll.; 1 ♂, 1 ♀, Ybeng, 5.iii.1903, D. Cator coll.; 1 ♂, Tani, 14.vi.1903, Adams bequest; 1 ♂, Tani, 16.vi.1903, ex Oberthür coll.; 1 ♂, Tani, 20.vi.1903, D. Cator coll.; 1 ♀, Tani, 12.vii.1903, Adams bequest. LIBERIA: 2 ♂, 12 miles east of Monrovia, -iii.1926 (*Portal Hyatt*); 1 ♀, 30 miles east of Monrovia, 200 ft, dry season, -ii.1926 (*M. Portal Hyatt*); 2 ♂, Kpaine, 1400 ft, 7°10' N., 9°7' W., 4.iii.1954 (*Dr W. Peters*); 2 ♂, Kpaine, 1400 ft, 14.iii.1954 (*Dr W. Peters*). IVORY COAST: 1 ♂, Bingerville, 1915 (*G. Melou*). GHANA: 2 ♂, Kumawu, 15.i.1938 (*C. S. Cansdale*); 1 ♂, 1 ♀, Aburi, 5.ii.1945 (*K. M. Guichard*); 1 ♂, 1 ♀, Western Province, under 100 ft, -iii.1928 (*P. Hyatt*); 1 ♂, Kuisa, Ashanti, -ii.1896, coll. Don.; 1 ♂, Ashanti, Kuisa, (*Major Donovan*); 1 ♂, West Ashanti, -i.1910; 2 ♂, Ashanti, -iii.1901; 1 ♂, Bumpata, Ashanti; 1 ♂, Ashanti, -i.1908 (*Dudgeon*); 1 ♂, Ashanti, -iii.1907 (*G. C. Dudgeon*); 1 ♂, Ashanti, Cape Coast C. to Kumasi, -i-ii.1896 (*Capt. H. N. Grosvenor Hood*); 2 ♂, 1 ♀, Kumasi, i.i.1913 (*J. D. G. Saunders*); 1 ♂, Kumasi, 4.ii.1913 (*J. D. G. Saunders*); 1 ♂, Kumasi, 23.ix.1913 (*J. D. G. Saunders*); 1 ♀, Accra; 2 ♀, -iii.1901; 1 ♀, Sunyani, Kumasi, 1913.

Liptena alluaudi Mabille

(Pl. 2, figs 34, 37; Text-fig. 16)

Liptena alluaudi Mabille, 1890 : 23, pl. 2, fig. 2, ♂. Holotype ♂, IVORY COAST: Assinie (BMNH) [examined].

The series in the BMNH collection is from Guinea, Ivory Coast and Nigeria.

L. alluaudi is similar to the lightly marked Nigerian examples of *fatima* with which it could easily be confused; however, *alluaudi* is smaller, whiter, and never

has any trace of discoidal spots. The male genitalia are of the same general structure.

It differs from *batesana* in being less white and in having a smaller apical patch. The male genitalia also differ.

L. alluandi is frequently confused with *augusta* although there are many points of difference between them. The range of the two species may overlap but we have no specimens with data that substantiate this supposition. On comparison *alluandi* and *augusta* show the following differences: on the upperside *alluandi* is creamy white with some light brown scaling at the base of the costa, and the small apical patch not extending beyond vein 4; the ground colour of *augusta* is clear white and the costa is broadly brown from the base of the wing to the apical patch, which covers a much greater area than that of *alluandi*, and terminates between veins 2 and 3. On the hindwing a marginal line is usually present in *augusta* but is not found in *alluandi*. On the underside the ground colour of *alluandi* is white, washed with light yellow, which is more intense at the base of the costa. The under surface of *augusta* is white and bears more markings than that of *alluandi*; scattered fuscous scales are present along the costa. On the forewing of *alluandi* the fringe is entirely brown in the region of the apical patch; there is a yellow marginal line and a blackish brown submarginal line which extend as far as vein 4. *L. augusta* has the basal portion of the fringe of the forewing brown with white tips; it also has the yellow marginal line and the blackish brown submarginal line, as in *alluandi*, but these extend further down the wing and reach vein 2. In addition *augusta* has an irregular fuscous line and an oblique line within the apical area. The hindwing of *alluandi* bears a yellow marginal line which is duplicated by a second fuscous line. The markings of *augusta* are variable, especially on the underside. In well-marked specimens, which are usually female, the fringes, marginal and submarginal markings are as on the forewing, although the marginal line is yellow only in the female. In addition there may be another brown line situated 1 mm on the inner side of these. There are occasionally some indistinct traces of lines, which are strongest in the region of the anal fold. The male genitalia of *alluandi* and *augusta* differ markedly.

♂ *genitalia*. Uncus broadly crescentic with a small depression at the distal margin. Tegumen rectangular. Subunci long, sinuate and very slender. Vinculum narrow, the saccus long and spatulate. Valvae triangular with a large dorsal process directed downwards, the ventral process large and broadly rounded. Aedeagus robust, swelling towards the obliquely cut apex, and bearing a strong tooth on the ventral surface.

MATERIAL EXAMINED.

♂ holotype, data given above.

IVORY COAST: 3 ♂, 2 ♀, Bingerville, -.xi.1913 (*Gaston Melou*); 1 ♀, Bingerville, .iii.1915 (*G. Melou*); 5 ♂, 3 ♀, Ivory Coast, 1919 (*Cremer*), ex Oberthür coll. NIGERIA: 3 ♂, 1 ♀, Ubiaja, Benin Province, -.v.1955 (*T. H. E. Jackson*); 1 ♂, 3 ♀, Ubiaja, Benin Province; 1 ♂, Mamu, Forest Reservation, 14.iv.1961 (*M. A. Cornes*); 1 ♂, Gambari Forest, 13.viii.1969 (*T. B. Larsen*); 1 ♀, Ilaro, Lagos district, -.iv.1955 (*T. H. E. Jackson*); 1 ♀, Olokemeji, Ibadan, -.iv.1955 (*T. H. E. Jackson*).

Liptena batesana Bethune-Baker

(Pl. 2, figs 35, 38; Text-fig. 17)

Liptena batesana Bethune-Baker, 1926 : 390, ♂. Holotype ♂, CAMEROUN: Bitje, Ja River, 2000 ft (*G. L. Bates*) (BMNH, dissection no. NHB 1956-2222) [examined].

In facies this species is closest to *alluandi* but may be distinguished therefrom by its smaller size, by a comparatively larger apical patch, and by the absence of the orange coloration along the inner border of the apical patch and on the underside.

It differs from *decipiens* by its brilliant white ground colour and reduced apical marking, the ground colour in *decipiens* being creamy white.

From *albicans*, which matches it in size, *batesana* may be distinguished by its smaller apical marking; in addition, *albicans* has a cream ground and a pronounced orange coloration on the underside. Length of forewing: 14 mm.

This species was described from Bitje, Cameroun, and is also known from Congo (Brazzaville) and Uganda.

♂ *genitalia*. Uncus crescentic, widely excised at the distal margin. Subunci slender, nearly straight and terminating in a small hook. Tegumen oval. Vinculum narrow, with a fish-tail shaped saccus. Valvae oval, the dorsal process short and ending in a strong tooth; the ventral process much longer and wider with a rounded extremity. Aedeagus slender, nearly straight with an acute tip.

♀. Unknown.

MATERIAL EXAMINED.

♂ holotype, data given above.

UGANDA: 2 ♂, Bwamba, -.vii.1941 (*T. H. E. Jackson*); 1 ♂, Bwamba, -.v.1941 (*T. H. E. Jackson*); 1 ♂, Bwamba, -.iv.1942 (*T. H. E. Jackson*); 1 ♂, Bwamba, -.v.1940 (*T. H. E. Jackson*).

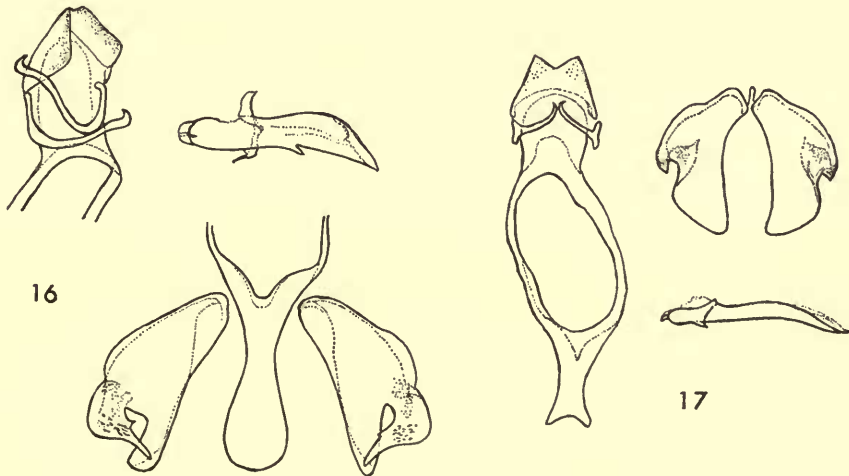


FIG. 16. *Liptena alluandi* Mabille, ♂ genitalia.

FIG. 17. *Liptena batesana* Bethune-Baker, ♂ genitalia.

Liptena augusta Suffert

(Pl. 3, figs 41, 44; Text-fig. 18)

Liptena augusta Suffert, 1904 : 50, ♂♀. NEOTYPE ♂, CAMEROUN: Bitje, Ja River, iv-vi. 1910, (*G. L. Bates*) (BMNH), here designated [examined].

Liptena augusta Suffert; Druce, 1910 : pl. 3, figs 2, 2a. [Figure of type.]

This species was once thought to be synonymous with *alluandi* Mabille (Druce, 1910b : 9); the differences between the two species were pointed out by Stempffer (1957 : 212).

Recorded from Ivory Coast, Nigeria, Cameroun and Uganda.

According to the original description the types (1 ♂, CAMEROUN: Lolodorf (*Conradt*); 3 ♀ CAMEROUN: Bipindi (*Zenker*)) were in the Berlin Museum; however, Dr Hannemann has informed us several times in the past that their types were destroyed in the last war. Therefore a male neotype is designated here.

♂. *Upperside*. Ground colour white. Forewing with the costa brown throughout its length, the apical patch has an irregular inner edge and extends down the outer margin to vein 2. On the hindwing there is a fine blackish brown marginal line from vein 6 to the anal angle.

Underside. Ground colour white. Forewing with a fine black outer marginal line, a white line of similar width and a further black line running parallel with the others, all terminating at vein 2. There is an undulating brown submarginal line, which is broader, and extends to vein 3. A brown, irregular, oblique band is positioned across the apical region. The hindwing is without markings except for a black line along the outer margin. Fringes fuscous in the region of the apical patch of the forewing, mostly white on the hindwing except at the vein endings where fuscous scales are intermixed with the white.

Length of forewing: 14.5 mm. Legs orange, brown ringed; palpi dark brown, white basally; antennae black, flecked with white, the club black with a pale tip.

♂ *genitalia*. Uncus rectangular with a deeply concave distal margin. Tegumen rounded with a narrow base. Subunci strongly curved, slightly dilated in their centre. Vinculum moderately narrow with a short saccus which terminates abruptly. Valvae gently angled after the basal third, the base is of the same width as the apex of the ventral process; the dorsal process is vermiform and curves downwards across the ventral process. Aedeagus strongly arched, the distal two-thirds of its length being very slender and tapering to a fine apex.

The ♀ of *augusta* differs slightly from the ♂ in the following ways. On the forewing upperside there is not as much brown scaling on the costa and the apical marking is more restricted, usually barely reaching vein 3 on the outer margin. On the forewing underside the space between the two black outer marginal lines is occupied by a yellowish line. On the hindwing underside, in addition to the fine black marginal line, there is a broader, brown submarginal line.

MATERIAL EXAMINED.

Neotype ♂, CAMEROUN: 'Bitje, Ja River, Cameroons, April-June 1910, Lesser rains (*G. L. Bates*)', dissection no. NHB. 1952-757, B.M. Type No. Rhop. 17269.

IVORY COAST: 1 ♂, Bingerville, 1915 (*G. Melou*). NIGERIA: 1 ♂, Oban, -i.1921, D. Cator coll.; 1 ♂, Oban, -ii.1921, D. Cator coll. CAMEROUN: 1 ♂, Mamfe, -x.1956 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Mamfe, -xi.1956 (*T. H. E. Jackson*); 1 ♀, Bitje, wet season, -iv-v.1909, Adams bequest; 3 ♂, 2 ♀, Bitje, -iv-vi.1910, lesser rains (*G. L. Bates*); 2 ♂, Bitje, wet season, -iv-v.1912 (*G. L. Bates*); 1 ♂, Bitje, dry

season, -vi-vii.1909, Adams bequest; 1 ♂, Bitje, -ix-xi.1911, Rothschild bequest; 1 ♂, Bitje, -x & xi.1910 (*F. T. Vallins*); 1 ♀, Bitje, -x-xi.1910, Rothschild bequest; 3 ♀, Bitje, 2000 ft, -x & xi.1912, Joicey Bequest; 1 ♂, Bitje, 2000 ft., -x. & xi.1912 (*F. T. Vallins*); 1 ♂, Bitje, wet season, 1913; 3 ♂, 1 ♀, Bitje, dry season, 1913, Joicey bequest; 1 ♂, 1 ♀, Bitje, 2000 ft, dry season (*G. L. Bates*); 1 ♂, 1 ♀, Bitje (*G. L. Bates*), Bethune-Baker coll.; 1 ♂, Lolodorf, 1894-5 (*L. Conradt*), ex Oberthür coll.; 1 ♀, Johann Albrecht's Hohe Station, 1896 (*L. Conradt*). UGANDA: 1 ♀, Mabira Forest, Kyagive, Mulange, 4000 ft (*R. A. Dummer*), Joicey bequest; 1 ♂, Mabira Forest, Chagwe, 3500-3800 ft, 16-25.vii.1911 (*S. A. Neave*).

In the BMNH collection there are 1 ♂, 3 ♀, from Oban, S. Nigeria (Pl. 2, figs 39, 40). These specimens are much larger than *augusta* which they otherwise resemble more closely than any other known species. As the abdomen of the only male is missing it is considered inadvisable to name these insects until further material becomes available.

Liptena ilaro sp. n.

(Pl. 3, figs 42, 45; Text-fig. 19)

This species is difficult to separate from *augusta* by its external characters; examples of *augusta* from Mamfe are identical in facies to *ilaro*.

♂. *Upperside*. Ground colour pure white. On the forewing the costa is dark brown from the base to the apical patch and approximately 0.75 mm in breadth. In *augusta* the costal stripe is often much broader. The apical patch is not as extensive as that of *augusta* and terminates abruptly at vein 4 or a little beyond. A black marginal line extends as far

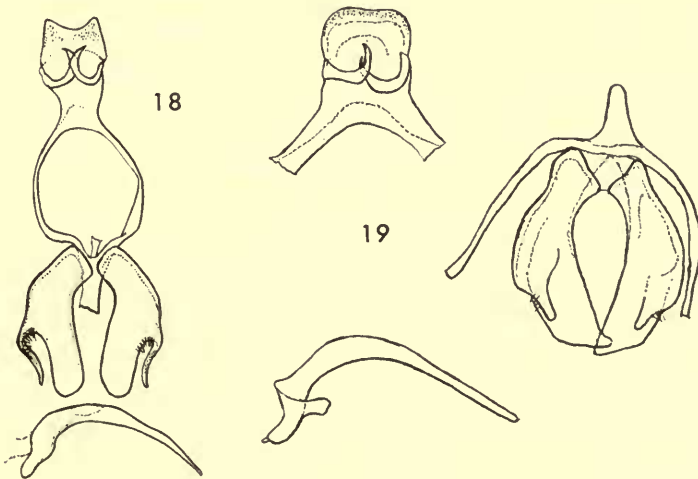


FIG. 18. *Liptena augusta* Suffert, ♂ genitalia.

FIG. 19. *Liptena ilaro* sp. n., ♂ genitalia.

as vein 3. In the examples examined the hindwing bears no markings; however, as this is a variable character in *augusta* it seems reasonable to assume that it may also be the case in this species. There is a greyish shadow visible around the outer margin of the hindwing, which is the underside marking showing through.

Underside. Hardly differs from that of *augusta*. On the forewing the base of the fringe is brown from the apex down to vein 4, then continues wholly white to the tornus. There is a dark brown marginal line which terminates between veins 2 and 3, and a lighter brown sub-marginal line extending to vein 4. In the 2 ♂ in the BMNH collection, the oblique subapical brown line commonly seen in *augusta* is not present. The hindwing bears a dark brown line which runs along the outer margin from vein 1b to vein 6. Fringes white.

Length of forewing: 15 mm. Legs, palpi and antennae as in *augusta*.

♂ *genitalia.* Differs markedly from that of *augusta* by the following characters: distal margin of the uncus regularly rounded with a slight depression in the middle, the lateral angles evenly rounded in contrast to *augusta* which has the distal margin concave and the lateral angles quite pronounced; the dorsal process of the valva is broader and heavier than in *augusta*, and the apex of the ventral process terminates obliquely instead of being rounded. Only the aedeagus is of the same shape – long and curved.

♀. Unknown.

MATERIAL EXAMINED.

Holotype ♂, NIGERIA: 'Ilaro, Lagos Dist., April 1955, (T. H. E. Jackson)', dissection no. NHB 1968-2763, B.M. Type No. Rhop. 17270.

Paratype ♂, as holotype, B.M. Type No. Rhop. 17271.

Liptena simplicia Möschler

(Pl. 3, figs 43, 46; Text-fig.20)

Liptena simplicia Möschler, 1887 : 63, fig. 14, ♀. 2 ♀ syntypes, GHANA: Aburi (depository unknown).

Larinopoda albula Druce, 1888 : 108. Holotype ♂, GHANA: Addah (M. Burt) (BMNH, dissection no. NHB 1968-2708) [examined].

The ♂ type of *albula* Druce, which is synonymous with *simplicia* Möschler, is in the BMNH collection.

On the upperside the costa is broadly brown, the apical patch extending almost to vein 2 on the outer margin. On the underside of all wings a fine orange line runs adjacent to the base of the fringes. On the hindwing underside the brown band along the outer margin is approximately 3 mm wide. Females resemble the males but are slightly larger.

♂ *genitalia.* Uncus conical, narrow and bluntly pointed at apex. Subunci short, curved and slender. Tegumen oval. Vinculum narrow, with a parallel-sided saccus of medium length. Valvae wide in their middle part, the dorsal process short and finely pointed, the ventral process much longer and terminating in a comparatively massive excurved apex. Aedeagus long, weakly curved, the extremity dilated and bifurcate.

Recorded from Guinea, Sierra Leone, Liberia, Ghana and Nigeria.

The publication date for this species should be amended to 1887, not 1888 as stated by Aurivillius (1925 : 503).

MATERIAL EXAMINED.

♂ holotype of *Larinopoda albula* Druce, data given above.

GUINEA: 2 ♂, 1 ♀, Macenta, 2000 ft, 2-10, 19-21.v.1926 (*C. L. Collenette*). SIERRA LEONE: 1 ♂, Yonni, 12.iii.1903 (*T. H. E. Jackson*); 1 ♂, Yonni, 6.xii.1903 (*D. Cator*); 1 ♀, Yonni, 6.xii.1903, Joicey bequest; 1 ♂, Yonni, 1.i.1904, Joicey bequest; 1 ♂, Tani, 9.iv.1903, *D. Cator* coll.; 1 ♂, Tani, 24.v.1903, Adams bequest; 1 ♂, Tani, 14.vi.1903, ex Oberthür coll.; 1 ♂, Tani, 23.vi.1903, ex Oberthür coll.; 1 ♂, Tani, 24.6.1903, ex Oberthür coll.; 1 ♂, Poli, 10.vii.1903, ex Bethune-Baker coll.; 1 ♂, Baranga, 11.iv.1903, *D. Cator* coll.; 1 ♂, Baranga, 12.iv.1903, Joicey bequest; 1 ♂, 1 ♀, Baranga, 17.iv.1903, ex Oberthür coll.; 2 ♂, Baranga, 18.iv.1903, Adams bequest; 2 ♂, Baranga, 20.vi.1903, ex Oberthür coll.; 1 ♂, Baranga, 20.vi.1903, *D. Cator* coll.; 1 ♂, 1 ♀, Baranga, 19.vi.1903, ex Oberthür coll.; 1 ♀, Baranga, 17.xi.1903, Adams bequest; 1 ♂, Lunia, 20.iv.1903, *D. Cator* coll.; 1 ♂, Bandajuma, -v-xi.1898, wet season (*G. I. Arnold*); 1 ♂, Fula Wusu, 12.i.1903, *D. Cator* coll.; 1 ♂, Fula Wusu, 17.iv.1903, *D. Cator* coll.; 1 ♂, Kholifa, 9.vi.1903, *D. Cator* coll.; 1 ♀, Kholifa, 11.vi.1903, Adams bequest; 2 ♂, Kholifa, 8.vii.1903, Adams bequest; 1 ♂, 1 ♀, Kholifa, 9.vii.1903, Adams bequest; 1 ♂, Kholifa, 10.xii.1903, ex Bethune-Baker coll.; 1 ♂, Kholifa, 19.xii.1903, *D. Cator* coll.; 1 ♂, Sierra Leone, 15.iv.1903 (*D. Cator*); 1 ♂, 12.vii.1903, Adams bequest; 1 ♂, 2.xi.1903 (*D. Cator*); 1 ♀, 24.xii.1903 (*D. Cator*); 10 ♂, 3 ♀, various collections. LIBERIA: 1 ♂, 1 ♀, Kpaine, 1400 ft, 7°10' N., 9°7' W., 18.iii.1954 (*Dr W. Peters*); 1 ♀, Davoyi, 1600 ft, 7°34' N., 8°44' W., 14.i.1954 (*Dr W. Peters*); 1 ♂, 12 miles east of Monrovia, -iii.1926 (*Portal Hyatt*); 3 ♀, 30 miles east of Monrovia, 200 ft, -ii.1926, dry season (*M. Portal Hyatt*). GHANA: 1 ♂, 3 ♀, Ashanti, -iii.1901 (*G. C. Dudgeon*); 2 ♀, Ashanti, -i.1910 (*G. C. Dudgeon*); 2 ♂, Sunyani Forest, Kumasi, 1912, Joicey bequest; 1 ♂, Kumasi, 21.ii.1913 (*J. D. G. Saunders*); 1 ♂, Kumasi, 1913 (*Smeed*); 1 ♂, 1 ♀, Accra, Crowley bequest; 2 ♂, Accra,

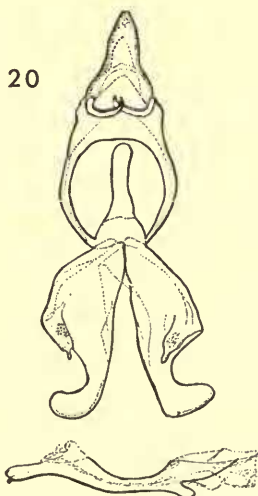


FIG. 20. *Liptena simplicia* Möschler, ♂ genitalia.

Rothschild bequest; 1 ♀, Volta River, Crowley bequest; 1 ♂, Odumase Swamp, 1913 (*Smeed*); 1 ♂, Agogo, 18.xii.1937 (*C. S. Cansdale*). NIGERIA: 2 ♂, 1 ♀, Obubra, Abakaliki Province, -vii.1960; 1 ♂, Ilesha, Southern Nigeria, 1911 (*L. E. H. Humfrey*); 1 ♂, 3 ♀, Olokemeji, Ibadan, -iv.1955 (*T. H. E. Jackson*); 1 ♂, Olokemeji, 1969 (*T. B. Larsen*).

***Liptena simplicia* f. *semilimbata* (Mabille) stat. n.**

(Pl. 3, figs 47, 50)

Lycaena semilimbata Mabille, 1890: 24, pl. 2, fig. 3. Type ♂, IVORY COAST: Assinie [examined] (in BMNH).

Although *semilimbata* was formerly regarded as a synonym of *simplicia*, its characters are sufficiently distinct to make it easily distinguishable from the typical form of this species. Due to the present evidence it is treated here as a form, differing from the typical form in the extent of the dark markings. On the upperside the costa is brown at the base, with only a few scattered dark scales along its length. The apical patch is reduced and tapers to terminate at vein 4. On the hindwing underside the outer marginal band is only 1.5 mm broad in *semilimbata*, whereas in the typical form it measures from 2 to 3 mm. There are 3 ♂, 3 ♀, in the BMNH collection, all from Ivory Coast.

The male genitalia do not differ from those of typical *simplicia*.

MATERIAL EXAMINED.

IVORY COAST: 1 ♂, 'Assinie', 'L. semilimbata Mab.', 'ex musæo P. Mabille', appears to be part of Mabille's original series; 1 ♂, Bingerville, 1915 (*G. Melou*); 1 ♂, 3 ♀, 1919 (*Cremer*).

***Liptena bassae* Bethune-Baker**

(Pl. 3, figs 48, 51; Text-fig. 21)

Liptena subpunctata Bethune-Baker, 1906: 340. ♂ ♀. ♂ ♀ types, NIGERIA: Kabba prov. 11.ix.1904 (BMNH) [examined]. [Nom. praeocc.]

Liptena bassae Bethune-Baker, 1926: 390. [Replacement name for *Liptena subpunctata* Bethune-Baker.]

A series of 27 specimens in the BMNH, mostly from the Cator collection, are all from Nigeria. In the original description the wing expanse was quoted in error as 39 mm, but the type measures 32 mm, and other specimens in the series measure between 32 and 34 mm.

The larger size of this insect together with its dull white coloration and the form of the underside markings distinguish it from all other known species of *Liptena*. The forewings have rather pointed apices. A figure is given as this species has not previously been illustrated.

♂ *genitalia*. Uncus triangular. Subunci long and slender, evenly curved. Tegumen wide. Vinculum rather narrow with a pointed saccus. Valvae quadrangular, the dorsal process ending in a blunt point; the ventral process much longer and broader, with a rounded apex. Aedeagus very long and slender, evenly sinuate, and slightly dilated at its extremity.

MATERIAL EXAMINED.

NIGERIA: 1 ♂, Uro, Kabba Province, -i.1915, D. Cator coll.; 1 ♂, Kpoinya, Kabba Prov., -ii.1915, D. Cator coll.; 1 ♂, Olle, Kabba Prov., 4.v.1917, D. Cator coll.; 2 ♂, Olle, Kabba Prov., 14.vii.1915 (*T. H. E. Jackson*); 4 ♂, 1 ♀, Olle, Kabba Prov., 14.vii.1915, D. Cator coll.; 1 ♂, Olle, Kabba Prov., 21.ix.1916, D. Cator coll.; 3 ♂, Kabba Province, 25.viii.1905, D. Cator coll.; 1 ♀, Kabba Province, 25.viii.1905, Bethune-Baker coll.; 1 ♂, Kabba Province, 11.ix.1904, D. Cator coll.; 1 ♂, Kabba Province, 22.ix.1905, D. Cator coll.; 1 ♀, Bassa Province, N. Nigeria, 4.i.1905; 1 ♂, Bassa Prov., -vi.1907, Bethune-Baker coll.; 1 ♂, Bassa Prov., -xi.1906, D. Cator coll.; 1 ♀, Bassa Prov., -xi.1906, Bethune-Baker coll.; 1 ♂, Bassa Prov., 23.xii.1904; 1 ♂, Bassa Prov., 25.xii.1904, D. Cator coll.; 1 ♂, Lagos (*G. Strachan*); 1 ♀, Ibadan, S. Nigeria, -vi.1951 (*H. J. Sutton*); 1 ♂, Otan Ila, S. Nigeria, -iv.1909 (*Dudgeon*); 1 ♂, Oyo, Ife, -viii.1935 (*C. L. King*).

Liptena tiassale Stempffer

(Pl. 3, figs 49, 52: Text-fig. 22)

Liptena tiassale Stempffer, 1969: 939, ♂ ♀. Holotype ♂, IVORY COAST: Tiassale (*B. K. Watulege*) (Stempffer coll.) [examined].

Described from Ivory Coast, this species does not appear to be closely related to any other white *Liptena*.

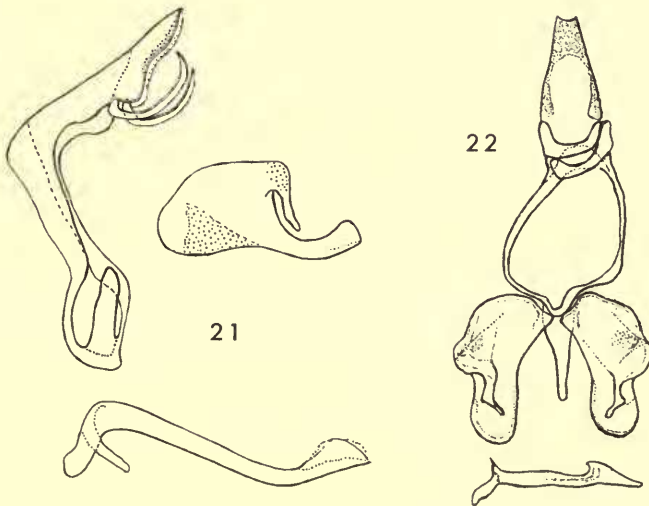


FIG. 21. *Liptena bassae* Bethune-Baker, ♂ genitalia.

FIG. 22. *Liptena tiassale* Stempffer, ♂ genitalia.

In the ♂ the *upperside* is dull white; the forewing has a greyish brown costal band of approximately 2 mm width which does not invade the cell. The apical patch is small, not extending beyond vein 4 on the outer margin, and with a diffuse internal edge. On the hindwing are traces of a brown marginal line.

The *underside* is dull white also. The forewing with the costa finely yellow, this coloration continuing down the outer margin to vein 3 and bordered on either side by a fine brown line. A zig-zag line, interrupted at the veins, and an indistinct area of brown scaling complete the apical markings. Hindwing with a black marginal line and a rather weak, submarginal brown line.

Length of forewing: 17 mm. Legs greyish yellow.

♂ *genitalia*. Uncus trapezoidal with the distal margin slightly excised. Subunci robust, weakly curved with a swollen tip. Tegumen narrow, elongated. Vinculum slender with a saccus of medium length. Valvae rectangular, dorsal process with a strong projection at its tip, the extremity is folded across the ventral process which is very broad with a rounded apex. Aedeagus small and slender, dilated before the pointed tip.

♀. Resembles the ♂.

MATERIAL EXAMINED.

All from Ivory Coast, data as given in original description.

Liptena hapale Talbot

(Pl. 3, figs 53, 56; Text-fig. 23)

Liptena hapale Talbot, 1935 : 72, pl. 1, fig. 5, ♀. Holotype ♀, UGANDA: Budongo Forest, viii-ix.1934 (*T. H. E. Jackson*) (UM, Oxford) [examined].

Talbot's holotype being a female, a male neallotype is described hereunder.

♂. *Upperside*. Ground colour creamy white. The forewing has a large brown apical area which extends down the outer margin to just below vein 3, where it ends abruptly. The broadly brown costal band increases gradually in width from the base towards the apical patch and extends inward to the upper limit of the cell. The hindwing is immaculate. Fringes of all wings white except in the region of the apical patch on the forewing, where they are brown.

Underside. Ground colour creamy white with a yellowish cast, particularly in the apical area of the forewing. There are no markings. Fringes coloured as on upperside.

Length of forewing: 15.5 mm. Legs and palpi black; antennae black, flecked with white, the club black.

♂ *genitalia*. Uncus crescentic with a shallow depression at the distal margin. Subunci short, each with a long apophysis approximately midway along the lower border, and a short hook at the tip. Tegumen oval. Vinculum narrow with a short saccus. Valvae rectangular, the dorsal process long, the ventral process shorter, each having a blunt apex. Aedeagus slender, curved, and with an acute extremity.

In this species the male is smaller than the female.

MATERIAL EXAMINED.

♀ holotype, data given above.

UGANDA: ♂ neallotype, Katera Forest, Masaka, x-xi.1956 (*V. G. L. van Someren*), B.M. Type No. Rhop. 17275; 4 ♂, Katera Forest, Masaka, -x-xi.1956 (*V. G. L.*

van Someren); 1 ♂, Katera, Sango Bay, Masaka, -ii.1956 (*T. H. E. Jackson*); 3 ♂, 3 ♀, Entebbe, -vii.1951 (*T. H. E. Jackson*); 1 ♂, Mpanga Forest, Mpigi, -viii.1959 (*T. H. E. Jackson*); 1 ♂, Toro, -iii.?.1940 (*T. H. E. Jackson*); 2 ♂, Budongo Forest (in Stempffer coll.).

***Liptena decipiens* (Kirby)**

Teriomima decipiens Kirby, 1890 : 268.

This species ranges through Nigeria, Cameroun, Gabon and Congo (Brazzaville). The distinctive cream ground, the absence of any dark markings on the hindwing upperside, and the black legs, all distinguish it from other species of *Liptena*, except for *pearmani* which is similar in facies. The most positive character for the separation of these two species is the shape of the uncus of the male.

***Liptena decipiens decipiens* (Kirby)**

(Pl. 3, figs 54, 57; Text-fig. 25)

Teriomima decipiens Kirby, 1890 : 268 ♂♀. LECTOTYPE ♀, CAMEROUN: Barombi (*Preuss*) (BMNH), here designated [examined].

Thanks to the co-operation of Dr Hannemann of the MNHU, Berlin, we have been able to examine the entire material of *decipiens* belonging to that institution. Only one surviving specimen of the original series taken by Preuss has been discovered; regrettably this specimen is a female and is now designated as a lectotype.

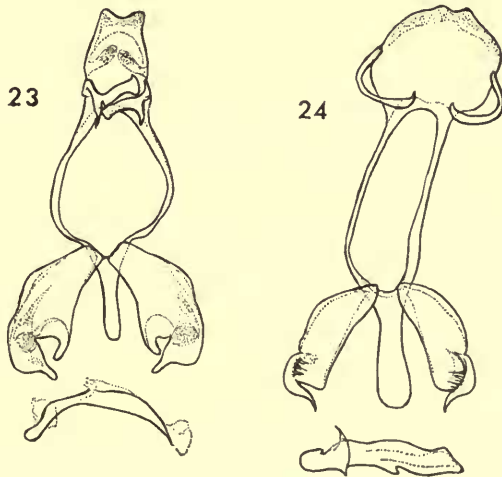


FIG. 23. *Liptena hapale* Talbot, ♂ genitalia.

FIG. 24. *Liptena inframacula* Hawker-Smith, ♂ genitalia.

♀. *Upperside*. Ground colour creamy white. Forewing with the costa very narrowly brown, broadening into an apical area of moderate size. Hindwing without markings.

Underside. Ground colour slightly more yellow than that of the upperside. In the apical region of the forewing are two indistinct submarginal lines which are little more than an intensification of the ground colour. The extent and intensity of colour of these lines is a variable characteristic. There is a dark brown marginal line on the upper two-thirds of the forewing and the fringes in this area are also brown; remainder of fringes as ground colour.

Length of forewing: 15 mm. Legs and palpi black; antennae black, flecked with white beneath, the club black with an orange tip.

♂ *genitalia*. Uncus trapezoidal, subunci slender, of uniform width and terminating in a short point. Vinculum narrow, saccus large and spatulate. Valvae rectangular with a triangular apex. Aedeagus short, parallel-sided, curved distally and with a dorso-ventral cleft.

The specimens in the BMNH collection are from North Cameroun and various localities in Nigeria.

MATERIAL EXAMINED.

Lectotype ♀, CAMEROUN: 'Kamerun, Barombi-Stat., Preuss S.', 'Paratypus'.

NIGERIA: 1 ♂, Bassa Province, N. Nigeria, 27.i.1905, T. H. E. Jackson coll.; 1 ♂, Bassa Prov., 2.ii.1905, Bethune-Baker coll.; 1 ♂, Mamu Awka, Onitsha Province, -.vi.1959, T. H. E. Jackson coll.; 1 ♂, Ndebeje, Calabar Province, -.ix.1958, T. H. E. Jackson coll.; 1 ♀, Omuo, Kabba Province, N. Nigeria, 29.iv.1914, D. Cator coll.; 1 ♀, Ubiaja, Benin Province, -.vi.1955 (*T. H. E. Jackson*); 2 ♀, Ilaro, Lagos District, -.iv.1955 (*T. H. E. Jackson*); 1 ♀, Oban, -.v.1920, D. Cator coll.; 1 ♂, S. Nigeria, -.ii.1921, D. Cator coll. CAMEROUN: 25 ♂, 4 ♀, Johann Albrecht's Hohe Station, 1896 (*L. Conradt*); 1 ♀, Mamfe, -.xi.1956 (*T. H. E. Jackson*); 1 ♂, Johann Albrecht's Hohe Station, 1898 (*L. Conradt*).

Liptena decipiens leucostola (Holland) **stat. n.**

(Pl. 3, figs 55, 58; Text-fig. 26)

Teriomima leucostola Holland, 1890 : 429, ♂. 4 syntypes, sex unknown, GABON: Kangwe, upper R. Ogove (*A. C. Good*) (CM, Pittsburgh) [examined].

Liptena citronensis Bethune-Baker, 1926 : 389, ♀. Holotype ♀, CAMEROUN: Bitje, Ja River, wet season, iv.1909 (BMNH) [examined]. **Syn. n.**

Liptena decipiens cameroona Bethune-Baker, 1926 : 389, ♂♀. Holotype ♂, CAMEROUN: Bitje, Ja River, 2000 ft, xi.1909 (BMNH, dissection no. NHB 1968-2693) [examined]. **Syn. n.**

Recorded from South Cameroun and Gabon.

It differs from the nominate subspecies in having the brown costal band broader throughout its length, the dark apical patch more extensive and the outer marginal part much broader than in *d. decipiens*. The underside is noticeably more yellow.

♂ *genitalia*. The subunci differ from those of *d. decipiens* by being appreciably broader; otherwise the genitalia do not differ.

MATERIAL EXAMINED.

♀ holotype of *citronensis*. ♂ holotype, ♀ allotype of *cameroona*. Data given above.

CAMEROUN: 1 ♀, Chang, 4700 ft, -viii.1922 (*G. L. Bates*); the following specimens all from Bitje, Ja River: 1 ♂, -iv.v.1909, wet season, Adams bequest; 1 ♂, -iv.1912, (*G. L. Bates*); 2 ♂, 1 ♀, -iv.- (*G. L. Bates*); 3 ♂, -iv-vi.1910, lesser rains (*G. L. Bates*); 3 ♂, 1 ♀, -iv-v.1912, wet season (*G. L. Bates*); 2 ♂, 1 ♀, early May and June, wet season; 2 ♂, -vi-vii.1909, dry season, Adams bequest; 1 ♂, -vi-vii.1909, dry season; 3 ♂, 1 ♀, dry season (*G. L. Bates*); 1 ♀, dry season, 1913; 1 ♀, -ix-x-xi.1912 (*F. T. Vallins*); 2 ♂, 1 ♀, -ix-x-xi.1911, Rothschild bequest; 2 ♂, 3 ♀, -ix.1908, Adams bequest; 2 ♀, -ix-x.1907, Adams bequest; 1 ♂, wet season, -x.1909, Adams bequest; 3 ♂, -x-xi.1913, wet season; 1 ♀, wet season, 1926 (*G. L. Bates*); 1 ♀, -xi.1909; 3 ♂, -x & xi.1910; 3 ♂, 1 ♀, -x-xi.1912; 1 ♂, wet season (*G. L. Bates*); 3 ♂, wet season, 1913; 6 ♂, 7 ♀, Bitje, little other data. GABON: 4 ♂, Lake Asebbe, Fernan-

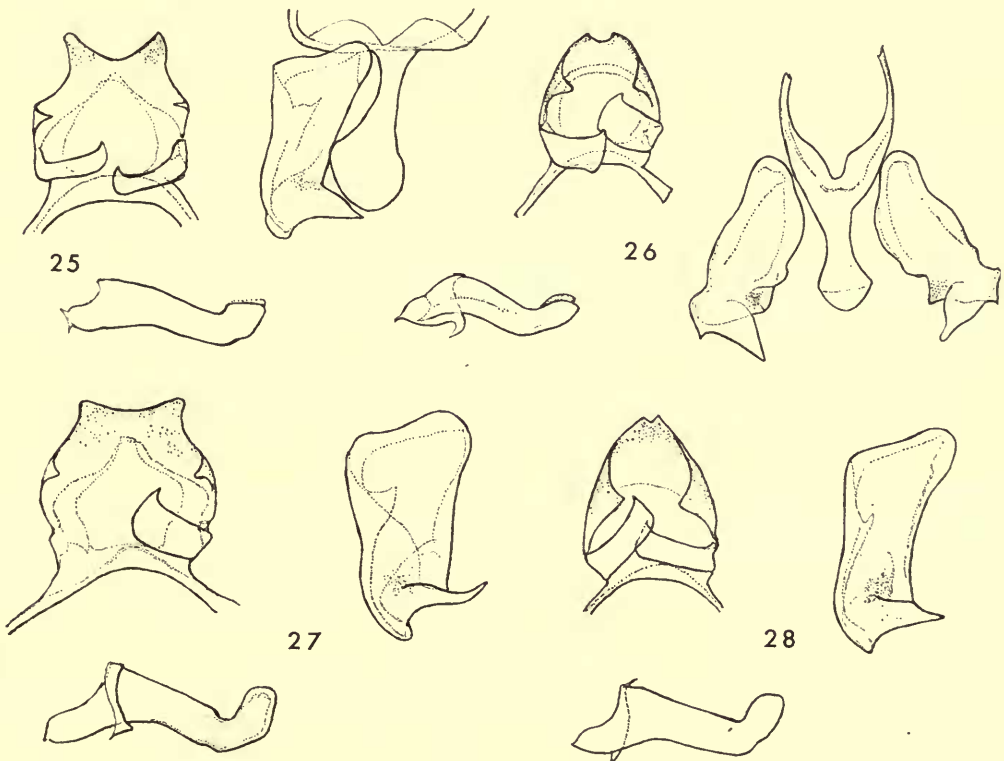


FIG. 25. *Liptena decipiens decipiens* (Kirby), ♂ genitalia.

FIG. 26. *Liptena decipiens leucostola* (Holland), ♂ genitalia.

FIG. 27. *Liptena decipiens etoumbi* subsp. n., ♂ genitalia.

FIG. 28. *Liptena pearmani* sp. n., ♂ genitalia.

Vaz, -i.1908 (*Dr Ansorge*); 2 ♂, Ogowe, Godman & Salvin coll.; 1 ♂, 1 ♀, Ogowe, Joicey bequest; 1 ♂, 1 ♀, Ogowe, ex Bethune-Baker coll.; 6 ♂, 3 ♀, Gabon, from various collections. CONGO (BRAZZAVILLE): 1 ♀, Etoumbi, -xi.1958 (*T. H. E. Jackson*).

Liptena decipiens etoumbi subsp. n.

(Pl. 3, figs 59, 60; Text-fig. 27)

This subspecies is similar to *d. leucostola* but the characters are more extreme; the brown apical patch is darker and more extensive, extending down the outer margin as far as vein 2, and covering almost one-half of the forewing. The costa is brown for its entire length. On the underside there is a brown line at the base of the fringes in the apical region, where they are brown and yellow chequered. There is a pair of dull yellow outer marginal lines and an oblique line, of the same hue, from vein 4 to the costa. The pair of dull yellow lines is continued along the outer margin of the hindwing. All material in the BMNH collection is from Congo (Brazzaville). The sexes do not differ externally. Length of forewing: ♂ 14 mm, ♀ 14.5 mm. Legs, palpi and antennae as in typical *decipiens*.

♂ *genitalia*. Similar to *d. leucostola*, the genitalia show broad, short subunci but can be distinguished from *d. leucostola* by the form of the apex of the valva, which is long, narrow and whip-like, not broadly triangular as in both *d. leucostola* and *d. decipiens*.

MATERIAL EXAMINED.

Holotype ♂, CONGO (BRAZZAVILLE): 'Etoumbi, Moyen Congo, Fr. Equat. Afr., -i.1959 (*T. H. E. Jackson*)', dissection no. NHB. 1968-2694, B.M. Type No. Rhop. 17277.

Paratypes. CONGO (BRAZZAVILLE): allotype ♀, Mambili Forest, Ouesso, -viii.1959 (*T. H. E. Jackson*), B.M. Type No. Rhop. 17278; 1 ♂, 1 ♀, as holotype; 5 ♂, as holotype, various dates; 1 ♂, as allotype.

Liptena pearmani sp. n.

(Pl. 4, figs 61, 64; Text-fig. 28)

This insect is dedicated to the late J. V. Pearman, the celebrated Psocopterist, who was a much esteemed colleague at Tring for many years.

This species has in the past been confused with *decipiens*, to which it is most closely related, but the ♂ armature is quite distinct. It is recorded from Nigeria and Ghana.

♂ *Upperside*. Ground colour creamy white. Forewing with the base of the costa fuscous. The apical patch is smaller than that of *d. decipiens*, barely reaching vein 3 on the outer margin and with an evenly curved inner edge.

Underside. Ground colour more yellow than that of the upperside, there is a pair of yellowish lines along the outer margin of all wings: they are broader in the apical region of the forewing. Fringes brown in the region of the apical patch, otherwise cream.

Length of forewing: 15 mm. Legs, palpi and antennae as in *decipiens*.

♂ *genitalia*. Of the twelve examples that have been dissected, all exhibit a triangular uncus, as opposed to the trapezoidal uncus of *decipiens*. The subunci are long and of medium breadth with a tapered base. The valvae and aedeagus are similar to those of *decipiens*.

♀. Apparently indistinguishable from *decipiens*.

MATERIAL EXAMINED.

Holotype ♂, NIGERIA: 'Ubiaja, Benin Prov., -vii.1955 (*T. H. E. Jackson*)', dissection no. SJM. 1969-80, B.M. Type No. Rhop. 17279.

Paratypes. NIGERIA: 1 ♂, as holotype, -vi.1950; 1 ♂, as holotype, -vi.1955; 1 ♂, as holotype, -vii.1956; 2 ♂, as holotype, -viii.1955; 1 ♂, Ubiaja, Benin Province (*T. H. E. Jackson*); 1 ♂, Omuo, Kabba Province, N. Nigeria, 29.x.1916, Cator coll.; 1 ♂, ditto, 29.iv.1914; 1 ♂, Ilaro, Lagos district, -iv.1955 (*T. H. E. Jackson*). GHANA: 1 ♂, Ho.; 1 ♂, Anfoega; 1 ♂, Kpandu (these 3 ♂ from Ghana in Stempffer coll.).

Liptena inframacula Hawker-Smith

(Pl. 4, figs 62, 65; Text-fig. 24)

Liptena inframacula Hawker-Smith, 1933 : 7, ♂. Holotype ♂, CAMEROUN: Bitje, Ja River, 2000 ft, 4.v.1912 (*G. L. Bates*) (BMNH) [examined].

This species is known from Cameroun and Congo (Brazzaville) but very few specimens have been collected. A female neallotype is described hereunder.

♀. *Upperside*. Ground colour creamy white. Forewing with the costa sooty and an angled apical patch extending down the outer margin as far as vein 4. Hindwing without markings but sufficiently translucent to show the markings of the underside.

Underside. Ground colour creamy white, the forewing slightly tinged with yellowish at the base; markings greyish brown. There is a small brown mark on the discoidal vein of the forewing, and immediately above this a brown costal mark; a further mark is situated on the costa equidistant between the end of the cell and the base of the forewing. An interrupted submarginal line extends from the costa to vein 4. A very fine, brown, marginal line, internally edged with yellow, runs along the outer margin of all wings. On the hindwing an interrupted submarginal line runs from the fore margin of the wing to the anal angle. There are a number of brown spots: one in the cell, a subcostal spot below vein 8, another between veins 6 and 7, one between veins 4 and 5, and a smaller one between veins 2 and 3.

Length of forewing: 15 mm. Legs and palpi orange; antennae black, flecked with white, the club black.

♂ *genitalia*. Uncus crescentic, narrow, very slightly excised at the distal margin. Tegumen rounded, unusually wide. Subunci slender, curved. Vinculum narrow with a fairly large, rounded saccus. Valvae of small size, the dorsal process ending in a curved point, the ventral process shorter with a rounded apex. Aedeagus nearly straight with a strong tooth on the ventral surface and an obliquely cut extremity.

The two males from Kelle, and the male from Bitje in the BMNH collection, are all more heavily marked than Hawker-Smith's type male from Bitje. The forewing length of the type and of the three males is 15 mm.

MATERIAL EXAMINED.

♂ holotype, data given above.

CONGO (BRAZZAVILLE): ♀ neallotype, 'Kelle, Moyen Congo', x. 1963 (*T. H. E. Jackson*), B.M. Type No. Rhop. 17280; 1 ♂, Kelle, iv. 1963 (*T. H. E. Jackson*); 1 ♂, Kelle, x. 1963 (*T. H. E. Jackson*). CAMEROUN: 1 ♂, Bitje, Ja River, 1915, Joicey bequest.

Liptena undularis Hewitson

(Pl. 4, figs 67, 69; Text-fig. 29)

Liptena undularis Hewitson, 1866 : 120, pl. 60, fig. 7, ♀. Holotype ♀, 'CONGO' (BMNH) [examined].

This species occurs in Cameroun, Gabon, Congo (Brazzaville), Zaire, Uganda and Angola. The size and shape of the apical patch varies according to locality.

As Hewitson's type was a female, a male neallotype is now described.

♂. *Upperside*. Ground colour white. Forewing with the base of the costa dusted with brown scales. The apical marking is not the usual form of a patch with a concave internal edge; it has a triangular incision of the ground colour which produces an angled effect at the apex. The width of the marking along the costa and down the outer margin varies between 3 and 4 mm. The apical marking is dark brown and extends from the distal third of the costa down the outer margin almost to vein 4. There are some small 'bare' areas within the apical patch where the ground colour is exposed. Fringes white, black at the periphery of the patch. The hindwing is without markings but the underside markings are visible through the wing. Fringes of the hindwing yellowish, black at the end of the veins.

Underside. All markings on the underside are rufous brown except where otherwise stated. Forewing white, except in the region of the markings where it is yellowish white. Black fringes correspond to the extent of the apical patch of the upperside; basad to these is an extremely fine band of dull yellow edged internally by a series of four brown linear markings which extend to vein 4. A thicker zig-zag band runs downwards from the costa to vein 4 and some vague brownish patches mark the inner extent of the apical patch of the upperside forewing. A short band from the costa runs posteriorly and obliquely to beyond the limit of the cell and ends at vein 4. Small spots are present inside the cell of some examples. The hindwing is yellowish white with dull yellow fringes except at the vein endings, where they are dark brown. There is an extremely fine marginal line. A zig-zag line runs from the fore margin of the hindwing to the anal fold. Another line, similar in form but not as distinct, is situated basad to that, and then a much heavier straight line, interrupted at the veins, traverses the median area of the wing. Between veins 6 and 7 is a patch shaped like an arrow-head which is positioned equidistant between the two latter lines and is inwardly directed. The base of the wing is crossed by several linear markings.

Length of forewing: 20 mm. Legs black, ringed with orange; palpi black; antennae black, flecked with white beneath.

♂ *genitalia*. Uncus crescentic with a slight depression in the distal margin; subunci evenly curved, ending in a point. Tegumen oval. Vinculum of moderate width with a long, spatulate saccus. Valvae rectangular, the long dorsal process ending in a small hook, the ventral process is shorter and terminates in a blunt point. Aedeagus long, cylindrical, and weakly curved.

MATERIAL EXAMINED.

♀ holotype, data given above.

ZAIRE: ♂ neallotype, Albertville, L. Tanganyika 770 m, i. 1922 (very dry) (*T. A. Barns*), B.M. Type No. Rhop. 17281; 1 ♂, Funa to Kinshasa, 1924 (*Major Briggs*); 3 ♂, 2 ♀, Katanga, Joicey bequest; 1 ♂, Kunzulu Estate, dry season, 1919; 1 ♀, Lutesi, nr Leopoldville, 1913 (*S. F. Faber*); 2 ♂, 1 ♀, no further data; 5 ♂, 1 ♀, Albertville, Lake Tanganyika, vi. 1919 (*T. A. Barns*). CAMEROUN: 2 ♂, 1 ♀, Bitje, Ja River, 2000 ft, -iv-v.1910, lesser rains (*G. L. Bates*); 2 ♂, 1 ♀, Bitje, 4.v.1912 (*G. L. Bates*); 1 ♂, as preceding specimen, Adams bequest; 1 ♂, 5 ♀, Bitje, early May and June, wet season, Joicey bequest; 1 ♀, Bitje, -ix.1908, Adams

bequest; 1 ♂, 1 ♀ Bitje, -ix-x-xi.1911 (*F. T. Vallins*); 2 ♀, ditto, Rothschild bequest; 3 ♂, Bitje, -x.1908, Adams bequest; 1 ♀, Bitje, -ix-x.1907, Adams bequest; 2 ♂, 1 ♀, Bitje, -x & xi. 1910, Rothschild bequest; 2 ♂, 1 ♀, Bitje, -x-xi.1913, wet season, Joicey bequest; 1 ♂, Bitje, -xi.1909, ex coll. Bethune-Baker; 2 ♂, Bitje, 3°N., 12°E., wet season, 1926 (*G. L. Bates*); 9 ♂, 10 ♀, Bitje, little other data. GABON: 1 ♂, Abanga, -x.1907 (*Dr Ansorge*); 1 ♀, Lake Azingo, -xii.1907 (*Dr Ansorge*); 1 ♀, Ogowe River, Rothschild bequest; 6 ♂, 4 ♀, insufficient data. CONGO (BRAZZAVILLE): 1 ♂, 10.xi.1940 (*V. M. Muspratt*); 4 ♂, Etoumbi Forest, 14.xii.1958 (*T. H. E. Jackson*); 3 ♂, Etoumbi, -xii.1958 (*T. H. E. Jackson*); 6 ♂, Etoumbi, -xi.1958 (*T. H. E. Jackson*); 1 ♂, Bopoto, upper Congo (*Rev. K. Smith*); 2 ♂, Bopoto (*Balfern*), Rothschild bequest. ANGOLA: 1 ♀, Landana, 1883 (*L. Petit*), ex Oberthür coll.; 2 ♂, Lukia River, -iv.1899 (*Penrice*); 1 ♂, Gulungo Alto, 12.i.1904 (*Dr Ansorge*); 1 ♀, N'Dalla Tando, northern Angola, 2700 ft, 5.i.1909 (*Dr W. J. Ansorge*); 1 ♀, as above, 9.i.1909; 1 ♀, ditto 20.ii.1908; 1 ♀, ditto, 20.ix.1908; 1 ♀, ditto, 23.xi.1908; 1 ♂, ditto, 25.xi.1908; 1 ♂, ditto, 28.xi.1908; 3 ♀, ditto, -xii.1908; 1 ♂, ditto, 4.xii.1908; 2 ♂, 1 ♀, Cassualalla, northern Angola, 27.vi.1908 (*Dr W. J. Ansorge*); 1 ♂, 1 ♀, as above, 28.vi.1908; 2 ♂, ditto, 30.vi.1908; 1 ♂, ditto, 10.vii.1908; 1 ♂, Loanda, 8.ii.1875 (*A. V. Homeyer*); 2 ♂, Loanda, ex Grose-Smith coll.; 1 ♂, 1 ♀, Prov. Malange, Rio Cuanza, 29.iii.1937; 1 ♂, Pungo Andongo, 12.iv.1875, (*A. V. Homeyer*); 1 ♂, 1 ♀, Pungo Andongo, -vii.1875 (*A. V. Homeyer*); 1 ♀, Pungo Andongo (*Welwitsch*), Felder coll.; 1 ♂, Benguella to Caconda, -v.1897 (*Penrice*); 1 ♂, Dondo, 6.v.1875 (*A. V. Homeyer*); 2 ♂, 1 ♀, Dondo, ex Suffert coll.; 2 ♂, 1 ♀, Barraca, Cuanza River, 30.v.1901 (*H. Pemberton*); 1 ♂, as above, 14.vi.1901; 1 ♂, Kinsembo, 1.viii.-; 3 ♂, Kinsembo, no other data; 1 ♀, Staz. Bauri, -ix.1883; 5 ♂, Marimba, 30.ix.1903 (*Dr Ansorge*); 1 ♂, 1 ♀, Bange Ngola, 5.x.1903 (*Dr Ansorge*); 1 ♀, as above, 4.x.1903; 2 ♂, Canhoca, 16.xi.1903 (*Dr Ansorge*); 1 ♂, Bolombo River (*Penrice*), also bearing a note 'rains in 2nd, 3rd, 4th, 9th & 12th months & little rain from E. 8-10th month.'; 5 ♂, 1 ♀, Angola, little other data. Specimens from Gabon & Uganda in Stempffer collection.

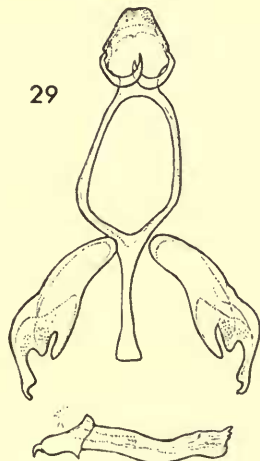


FIG. 29. *Liptena undularis* Hewitson, ♂ genitalia.

Liptena ferrymani (Grose-Smith & Kirby)

Pentila ferrymani Grose-Smith & Kirby, 1891 : 50, pl. 12, figs 11, 12.

The extent and shape of the brown arc from the costal base on the forewing upperside are characteristic of this species. Recorded from Ivory Coast, Nigeria, Cameroun and Sudan.

Liptena ferrymani ferrymani (Grose-Smith & Kirby)

(Pl. 4, figs 68, 70; Text-fig. 30)

Pentila ferrymani Grose-Smith & Kirby, 1891 : 50, pl. 12, figs 11, 12, ♂. Holotype ♂, NIGERIA: Lokoja (*Ferryman*) (BMNH) [examined].

Recorded from Nigeria, Cameroun, and Bahr-el-Ghazal, Sudan. Specimens from the eastern confines of the range appear to differ from typical *ferrymani*, but we have insufficient material upon which to base a further subspecies. The three females in the BMNH collection have the brown arc from the costal base very broad, covering rather more than half of the cell; the distal end of the arc retains its width, instead of tapering off as it does in the nominate subspecies. The spacing of the transverse bars of the underside also differs from those of normal specimens of *ferrymani*.

The male holotype of *ferrymani* is in the BMNH collection; the locality given is 'Lokaja' and is probably a mis-spelling or alternative spelling of Lokoja, which is in Nigeria. The female has not previously been described.

♀. *Upperside*. Ground colour white with a fuscous suffusion at the base of all wings. Forewing with the brown arc from the base of the costa approximately 2 mm in width – not quite as broad as in the type; the marking extends beyond the cell between veins 5 and 6. The brown apical marking extends down the outer margin as far as vein 2, where it terminates as a fine line. Hindwing with the seven bars of the underside visible through the wing. The outer margin bears a brown marginal line. The fringes of all wings white, except in the apical area where they are brown.

Underside. Ground colour of forewing white, the area corresponding to the brown arc of the upperside is a mixture of fuscous and dirty white. The apical marking also appears to have a dirty white ground due to the density of brown scaling of the upperside. Fringes of the apical marking yellowish with fuscous tips, a brown marginal line as far as midway between veins 2 and 3. Basad to this is a broader submarginal line, interrupted by the veins and extending downwards as far as vein 4. Across the inner limit of the apical marking is a broad irregular brown band. Hindwing ground colour cream. The wing is marked by seven narrow brown bars. The two basal bars are straight; the third only traverses the lower half of the wing, ending at the origin of vein 7; the fourth and fifth run from the costa to the anal fold and are slightly irregular; the sixth is scalloped and ends at vein 6; the seventh is complete and is more markedly scalloped; distad to this is a darker marginal line. The fringes of the underside are white, except in the region of the apical marking of the forewing where they are fuscous.

Length of forewing: 19 mm, expanse 38 mm. Legs dull orange with brown scaling; palpi white, faced internally, and tipped, with black; antennae black, white-flecked.

♂ *genitalia*. Uncus conical with a slight depression in the distal margin. Tegumen oval. Subunci curved, bulbous at the tip and with a sharply pointed hook. Vinculum narrow with a long, broad, evenly rounded saccus. Valvae triangular, the dorsal process broad at base

and tapering to a slender, slightly curved apex, the ventral process smaller, also with a broad base. Aedeagus moderately slender narrowing to a truncate apex.

MATERIAL EXAMINED.

♂ holotype, data given above.

NIGERIA: ♀ neallotype, Lagos, 1900 (*Dr Strauchan*), B.M. Type No. Rhop. 17282; 1 ♂, Kadura River Gardens, -vii-viii.1967 (*Stuart Norman*), 'flying among citrus bushes, mango trees & long grasses immediately after rain'; 1 ♂, Kadura, northern Nigeria, -viii-ix.1951 (*R. W. Pring*); 1 ♂ Kadura, -x.1951; 4 ♂, Nassarawa, northern Nigeria, i.vi.1911, D. Cator coll.; 2 ♂, Lagos, 1906 (*Dr Strauchan*). CAMEROUN: 4 ♂, Buar, 10-25.v.1914; 1 ♂, Babua Bondaye, 6.v.1914. SUDAN: 3 ♀, Tambura, Bahr-el-Ghazal.

***Liptena ferrymani bigoti* Stempffer**

(Text-fig. 31)

Liptena ferrymani bigoti Stempffer, 1964 : 1233, ♂. Holotype ♂, IVORY COAST: Nion, 3.v.1962 (*L. Bigot*) (MNHN, Paris) [examined].

This race occurs in the Ivory Coast. There are no examples in the BMNH collection. The holotype is in the MNHN, Paris. It differs from *f. ferrymani* in the absence of the white spot in the dark apical patch on the upperside, and in the enlargement between veins 2 and 3, of the lowermost portion of the apical patch. This enlarged portion is also present on the underside, whereas in *f. ferrymani* it does not exist on the underside. The transverse lines of the underside hindwing of *f. bigoti* are finer and brighter, and of these the fourth, fifth and sixth are all irregular. The nervures are not brown.

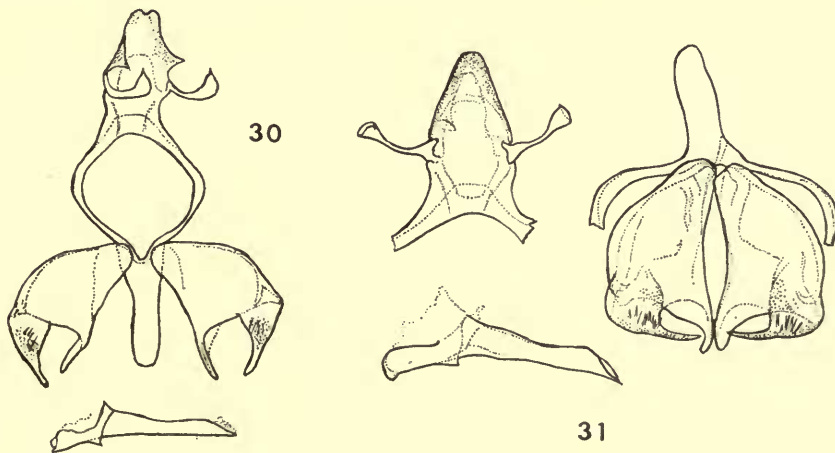


FIG. 30. *Liptena ferrymani ferrymani* (Grose-Smith & Kirby), ♂ genitalia.

FIG. 31. *Liptena ferrymani bigoti* Stempffer, ♂ genitalia.

The male genitalia illustrated by Stempffer (1967 : 49, fig. 40) under *f. ferrymani* are, in fact, those of *L. f. bigoti*. At the time when the figure was drawn Stempffer thought it to be *f. ferrymani* as no other specimen was available to him; later, when he examined a true example of the typical race he discovered that the male genitalia differed and that the original genitalia drawing was not that of *f. ferrymani*, as he had previously thought, but was in fact that of a new subspecies of *ferrymani*, and this he later named *bigoti*.

♂ *genitalia*. Differ from those of the typical race in that the conical uncus shows no sign of a depression at the apex. Subunci differ in being narrow in their central part and not as curved as those of *f. ferrymani*. Valvae with dorsal and ventral processes broader and shorter.

Liptena septistrigata (Bethune-Baker)

(Pl. 4, figs 63, 66; Text-fig. 32)

Pentila septistrigata Bethune-Baker, 1903 : 325, '♂'. Holotype ♀ (not ♂ as stated by Bethune-Baker), SIERRA LEONE: Moyamba, 15.vi.1902 (BMNH, dissection no. SJM 1970-129) [examined].

This species is represented in the BMNH collection by specimens from Sierra Leone, Ivory Coast, Ghana and Nigeria. As Bethune-Baker's 'male' type is actually a female, a male neallotype is described below.

♂. *Upperside*. Ground colour white. Forewing with a dusting of dusky scales at the base. The broad, brown costal band encroaches upon the upper limit of the cell; beyond the cell the brown coloration broadens and intensifies into the apical patch. The patch is approximately 4 mm wide down the outer margin as far as vein 4, where it narrows sharply, terminating between veins 3 and 4. A very fine, brown marginal line runs from the apex to midway between veins 2 and 3. Hindwing white with the bars of the underside showing through the wing. There is a brown marginal line running from the anal angle to vein 3; parallel to this the fringes bear some fuscous linear marks. Fringes brown in the region of the apical patch of the forewing, white elsewhere.

Underside. Ground colour white. On the forewing there is a brown streak along the upper limit of the cell and the area anterior to this is dull yellowish with some brown scaling. From the centre of the costa a brown line, 4.5 mm long, arises and runs obliquely outwards just above the upper angle of the cell. The apical area appears dirty white due to the intensity of the upperside dark marking showing through the wing. A very fine brown marginal line runs from the apex down to midway between veins 2 and 3. A less fine, brown, submarginal line, interrupted at the veins, extends downwards to vein 3. Between these two lines the coloration of the wing is clear yellow, extending beyond the brown marginal line, down to vein 2. Basad to these is a brown scalloped line down to vein 4. In each cell space between veins 8 and 9, and 9 and 10, there is a single linear mark. A broader irregular brown line at the inner limit of the apical area does not follow the contour of the upperside apical patch as does that of *ferrymani*, but runs from the costa in an uneven curve, keeping within the contour of the upperside marking, and terminating at vein 4. Seven transverse stripes and a marginal line mark the white ground of the hindwing. Stripes 1 and 2 are straight and complete; stripe 3 is abbreviated running from the anal fold to the origin of vein 7; the fourth and fifth are complete; the sixth is similar to the fifth and at vein 6 it coalesces with the seventh stripe, which is narrower and more clearly defined and follows the contour of the outer margin. There is a fine submarginal brown line bordered outwardly by a yellowish band corresponding to the forewing markings. Distad to this is a marginal line, entire in the lower

part of the wing, but broken into short dashes anteriorly. Fringes of the underside white except in the apical area of the forewing where they are pale brown.

Length of forewing: 16 mm, expanse 33 mm. Legs orange, with some scattered brown scales, especially on the femur; palpi orange with some brown scaling; antennae black, with white scaling on the ventral and lateral surfaces, the club tipped with orange.

♂ *genitalia*. Uncus crescentic, deeply excised at the distal margin. Subunci curved, slightly swollen in the middle, with a strong hook at the tip. Tegumen narrow at base. Vinculum oval with a long spatulate saccus. Valvae rectangular, the dorsal process ending in a strong hook, the ventral process longer with a wide rounded apex. Aedeagus rather short, dilated before the rounded extremity.

MATERIAL EXAMINED.

♀ holotype.

SIERRA LEONE: ♂ neallotype, Mabang, 30.xii.1903, D. Cator coll., B.M. Type No. Rhop. 17283; 1 ♂, Tabi, 24.iv.1903, D. Cator coll.; 3 ♂, Mabang, 27.xii.1903 (*D. Cator*); 1 ♂, Mabang, 30.xii.1903, Adams bequest; 1 ♀, Panguma, -i.1908 (*G. C. Dudgeon*); the following specimens from Moyamba: 1 ♂, 4.i.1904, Adams bequest; 1 ♂, 5.i.1904, Adams bequest; 3 ♂, 5.i.1904; 1 ♂, 11.i.1904 (*T. H. E. Jackson*); 1 ♂, 2 ♀, 21.ii.1903 (*T. H. E. Jackson*); 1 ♀, 11.i.1904, Adams bequest; 1 ♂, 2 ♀, 21.ii.1903, Adams bequest; 1 ♀, 21.ii.1903, ex coll. Bethune-Baker; 1 ♂, 24.ii.1902 (*D. Cator*); 2 ♂, 1 ♀, 17.iii.1903; 2 ♂, 15.iii.1903, Rothschild bequest; 1 ♀, 24.iv.1902, Adams bequest; 1 ♂, 2.v.1902 (*T. H. E. Jackson*); 1 ♂, 20.x.1903; 1 ♀, 31.x.1903 (*T. H. E. Jackson*); 7 ♂, 5 ♀, insufficient data. IVORY COAST: 1 ♂, Deimba, 17.ii.1903 (*Pemberton*); 1 ♀, Bingerville, 14-20.vi.1915 (*G. Melou*); 1 ♂, 1 ♀, Sunyani, Coomassie, 1913, Joicey bequest. NIGERIA: 1 ♂, 1 ♀, Bassa Prov., northern Nigeria, 23.xii.1904, D. Cator coll.; 1 ♂, Eket, southern Nigeria, 20.viii.1920, D. Cator coll.; 1 ♂, Obubra, Abakaliki Province, -vii.1960 (*T. H. E. Jackson*); 1 ♀, Ilesha, southern Nigeria (*Capt. Humfrey*); 1 ♀, Ogruga, Adams bequest. ZAIRE: 1 ♂, Funa (*F. T. Vallins*).

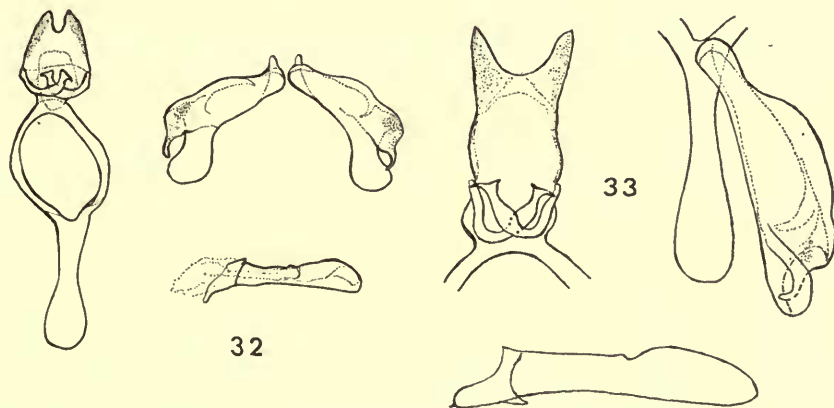


FIG. 32. *Liptena septistrigata* (Bethune-Baker), ♂ genitalia.

FIG. 33. *Liptena subundularis* (Staudinger), ♂ genitalia.

Liptena subundularis (Staudinger)

(Pl. 4, figs 71, 74; Text-fig. 33)

Pentila subundularis Staudinger, 1891 : 215, ♂ ♀. LECTOTYPE ♂, GABON: Ogowe (A. Mocquerys) (BMNH), here designated [examined].

Staudinger's types of this species were mostly destroyed in the last world war. There is one male specimen in the BMNH collection which is believed to be one of the original series. In his description Staudinger states that a series was taken by A. Mocquerys at Ogowe. On our rather old male the locality label reads 'Ogowe Lambar. Moq.' and the original description agrees with this specimen. It also bears a label 'Origin.' which supports the belief that it belonged to the original series; it is designated lectotype. This example also agrees with the figure of *subundularis* given by Grose-Smith & Kirby (1892 : 63, pl. 18, figs 9, 10). The figure given by Aurivillius (1918 : pl. 63h) is poorly executed.

♂. *Upperside*. Ground colour dirty white. The base of the forewing has a slight brownish suffusion; the costa is brown throughout. The apical patch differs from that of *augusta* by having the internal border irregular, whilst that of *augusta* exhibits an even curve. There are traces of a brown marginal line on the hindwing which are strongest towards the anal angle. Fringes brown in the region of the apical patch of the forewing, white elsewhere.

Underside. Ground colour dirty white. The forewing bears a dark brown line at the base of the fringes; immediately basad of this is a yellowish line, which itself is bordered internally by a dark brown line that is interrupted by the veins and terminates at vein 3. There is an irregular brown line extending from the costa to vein 3. Traces of an oblique line are discernible across the wing apex, but the specimen is rather worn. The outer margin of the left forewing and two smaller areas on the other forewing have at some time been patched. The hindwing bears a pair of outer marginal lines, the innermost of the two being the heavier. The two or three transverse lines on the hindwing mentioned by Staudinger are not visible on this specimen, but are present, to a greater or lesser degree, on some other specimens in the BMNH collection. The authors believe that Staudinger's statement 'beim Kamerun-♀ und 1 ♂ fehlen alle drei Querlinien fast ganz' (translation: 'in the Cameroon ♀ and 1 ♂ all three transverse lines are almost completely absent') refers to this specimen.

Length of forewing: 15 mm. Legs yellow with scattered black scales; palpi pale yellow with the terminal joint black on the outside; antennae black, flecked with white beneath, the club tipped with dull orange.

♂ *genitalia*. Uncus composed of two elongate triangular lobes separated by a deep concavity. Subunci rather slender, curved, slightly swollen in their middle part; the distal extremities are anvil-shaped. Tegumen oval. Vinculum narrow with a long spatulate saccus. Valvae rectangular, the dorsal process ending in a broad hook, the ventral process rounded distally. Aedeagus long and stout with the distal third dilated.

Schultze (1923 : 1179) considered *augusta* to be a synonym of *subundularis*. This is not so, as the genitalia of the lectotype male cited above differ widely from those of *augusta*. Other external points of difference are: the inner border of the apical patch evenly curved in *augusta*, irregular in *subundularis*; base of the costal stripe clearly defined in *augusta* whilst in *subundularis* it is suffused, this suffusion invading the cell; hindwing underside of *subundularis* bears traces of transverse lines near the anal fold which are not present in *augusta*. In addition to the

Ogowe male there are in the BMNH collection three females from Cameroun and two females from Fernando Po; there are no examples of *angusta* from Gabon or Fernando Po.

MATERIAL EXAMINED.

Lectotype ♂, GABON: Ogowe, Lambar., Moq., Origin., dissection no. NHB. 1968-2757, B.M. Type No. Rhop. 17284.

FERNANDO PO: 1 ♀ (*Rev. W. Cooper*); 1 ♀, Hewitson coll. CAMEROUN: 1 ♀, Johann Albrecht's Hohe Station, 1898 (*L. Conradt*); 2 ♀, Port Victoria, 1919 (*Capt. Fitz-Roy*).

Liptena nigromarginata Stempffer

(Pl. 4, figs 72, 75; Text-fig. 34)

Liptena jacksoni Stempffer, 1954a : 9, ♂ ♀. Holotype ♂, UGANDA: Budongo, vii. 1936 (*T. H. E. Jackson*) (BMNH) [examined]. [Nom. praeocc.]

Liptena jacksoni Stempffer; Stempffer, 1954b : pl. 1, fig. 14.

Liptena nigromarginata Stempffer, 1961 : 43. [Replacement name for *Liptena jacksoni* Stempffer.]

This species ranges through forested areas of Uganda, Zaire and Congo (Brazzaville).

This species is similar to *simplicia* on the upperside, but is easily distinguished by the characters of the underside. *L. nigromarginata* does not have the broad brown outer marginal band on the hindwing underside that is present in *simplicia*, but possesses a distinctive subcostal blotch in cell space 6.

♂ *genitalia*. Uncus trapezoidal, the distal margin divided into two lobes by a deep median excision. The subunci are quite robust, curved and slightly swollen towards the extremity. Tegumen oval and slightly sclerotised. Vinculum moderately broad with a long spatulate saccus. Valvae rectangular, the dorsal process terminating in a recurved point, the ventral process broad with a rounded apex. Aedeagus of medium length, slightly swollen towards its rounded extremity and containing numerous cornuti.

MATERIAL EXAMINED.

♂ holotype, data given above.

CONGO (BRAZZAVILLE): 2 ♂, Etoumbi, -.xi.1958 (*T. H. E. Jackson*); 2 ♂, 2 ♀, Etoumbi, -.xii.1958 (*T. H. E. Jackson*); 1 ♂, Etoumbi Forest, 14.xii.1958 (*T. H. E. Jackson*); 1 ♀, Etoumbi, -.i.1959 (*T. H. E. Jackson*). UGANDA: allotype ♀, Katera vii. 1938 (*T. H. E. Jackson*); 1 ♀, Tero Forest, S.E. Buddu, 3800 ft, 26-30.ix.1911 (*S. A. Neave*); 1 ♀, Budongo -.vii.1939 (*T. H. E. Jackson*); 1 ♀, Katera, -.vii.1938 (*T. H. E. Jackson*); 2 ♀, Katera, Sango Bay, -.x.1953 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Katera, Sango Bay, -.xi.1953 (*T. H. E. Jackson*); 1 ♂, 2 ♀, Katera Forest, Masaka, -.x-xi.1953 (*van Someren*); 1 ♂, Katera Forest, Masaka, -.xi.1955 (*V. G. L. van Someren*).

Liptena subsuffusa Hawker-Smith

(Pl. 4, figs 73, 76; Text-fig. 35)

Liptena subsuffusa Hawker-Smith, 1933 : 7, ♂. Holotype ♂, ZAIRE: Upper Lova Valley, nr Masisi, W. Kivu, 5000–6000 ft, forest and long grass, wet season, ii. 1924 (*T. A. Barns*) (BMNH) [examined].

Similar in appearance to *perobscura* but the male genitalia differ markedly. The female remains unknown.

No specimens have been added to the series in the BMNH collection since Hawker-Smith described the species from the 7 males in his possession in 1933.

Known only from Zaire.

Upperside ground colour pale creamy white. Forewing with the costa broadly blackish brown, just encroaching upon the upper limit of the cell, but not as broad as in *perobscura*. The blackish brown outer marginal area is approximately the same width as in *perobscura*. The discoidal spot merges into the costal band. On the hindwing the diffuse outer marginal brown band is much narrower than in *perobscura*. The discoidal spot of the underside is visible through the wing.

Underside ground colour white. On the forewing the costa and outer margin are suffused with brown scales, but isolating a white subapical patch. There is a well defined discoidal spot on the hindwing, and a black outer marginal line.

♂ *genitalia*. Uncus trapezoidal with a rounded depression at the distal margin. Subunci rather slender, dilated before the acute tip. Tegumen oval. Vinculum narrow with a long saccus. Valvae rectangular, the dorsal process with a slender, curved extremity, the ventral process slender and considerably longer. Aedeagus long, cylindrical, sinuate and only slightly dilated before the tip.

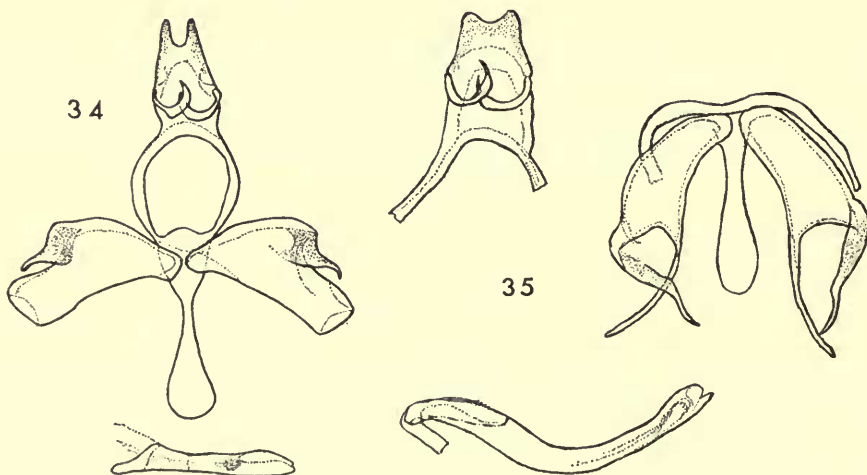


FIG. 34. *Liptena nigromarginata* Stempffer, ♂ genitalia.

FIG. 35. *Liptena subsuffusa* Hawker-Smith, ♂ genitalia.

MATERIAL EXAMINED.

♂ holotype, data given above.

ZAIRE: 1 ♂, Middle Lowa Valley, nr Walikali, 3000–4000 ft, forest –.ii.1924, wet season (*T. A. Barns*); 1 ♂, south side, middle Lowa valley, south of Walikali, W. Kivu, 3500 ft, forest, –.iii.1924, wet season (*T. A. Barns*); 4 ♂, data as holotype.

In the BMNH collection there are two females from Bitje, Cameroun. These insects appear to be close to *subsuffusa*, but differ from it in the width of the outer marginal bands, which on the hindwing upperside and all wings underside are three to four times broader than those of *subsuffusa*. It is considered inadvisable to name these specimens until further material is available.

Liptena perobscura Druce

(Pl. 5, figs 77, 80; Text-fig. 36)

Liptena perobscura Druce, 1910a : 363, pl. 33, fig. 13, ♀. Holotype ♀, CAMEROUN: Bitje, Ja River, 2000 ft, dry season (*G. L. Bates*) (BMNH) [examined].

Liptena kelle Stempffer, 1964 : 1231, figs 6, 7, ♂ ♀. Holotype ♂, CONGO (BRAZZAVILLE): Kelle, iv. 1963 (*T. H. E. Jackson*) (BMNH, Stempffer dissection no. 5792) [examined]. **Syn. n.**

This species occurs in Cameroun and Congo (Brazzaville). As Druce described only the female of *perobscura*, Stempffer's male holotype of *kelle* is here designated neallotype of this species.

♂. *Upperside*. Ground colour creamy white. Forewing with the basal, costal, apical, and outer marginal areas sooty, leaving only a small area of ground colour. On the hindwing the discoidal spot of the underside is visible through the wing; there is an outer marginal band of approximately 1.5 mm width.

Underside. Ground colour as upperside. Forewing with a small discoidal spot, two fine lines running out obliquely from the costa, and a pair of marginal lines. The hindwing bears three small, well defined spots in the basal area, which together with the discoidal spot are arranged in a diamond-shape. There are vague traces of other spots and lines towards the outer margin of the wing. The numerous markings on the hindwing underside of *perobscura* provide a quick means of separating it from *subsuffusa* which has only the single discoidal spot on the wing.

♂ *genitalia*. Uncus crescentic, slightly excised at the distal margin. Tegumen oval, fused to the uncus at the apex. Subunci short, considerably dilated in their middle region and terminating in a small, sharp point. Vinculum moderately large, prolonged ventrally by a short, massive, spatulate saccus. Valvae small, trapezoidal, the dorsal process furnished with short spines, ventral process short and digitate. Aedeagus short and robust with an unusual bulbous extremity.

MATERIAL EXAMINED.

♀ holotype, data given above.

CAMEROUN: 1 ♂, Bitje, Ja River, –.ix.x-xi.1911, Rothschild bequest; 1 ♂, Bitje, –.x & xi. 1910; 2 ♂, 3 ♀, Bitje, –.x & xi. 1912; 2 ♂, 1 ♀, Bitje, wet season, 1913. CONGO (BRAZZAVILLE): ♂ neallotype, data given above (*kelle* holotype, in synonymy) B.M. Type No. Rhop. 17285; allotype ♀ of *kelle*, data as ♂ neallotype; 1 ♂, Kelle, –.viii.1963 (*T. H. E. Jackson*).

Liptena evanescens (Kirby)

Pentila evanescens Kirby, 1887 : 364.

The colour and markings of the wings of this species are not particularly distinctive. The male genitalia (Text-fig. 37) are similar to those of *L. ochrea*. Recorded from Ivory Coast, Ghana, Nigeria, Cameroun, Fernando Po, Sao Tomé and Gabon.

Liptena evanescens evanescens (Kirby)

(Pl. 5, figs 83–88; Text-fig. 37)

Pentila evanescens Kirby, 1887 : 364, ♂. Holotype ♂, CAMEROUN (BMNH, dissection no. NHB 1968–2734) [examined].

Pentila evanescens Kirby; Grose-Smith & Kirby, 1887 : pl. 2, figs 11, 12.

[*Liptena immaculata* 'Staudinger'; Aurivillius, 1925 : 333, 334. Misidentification.]

In 1868 Trimen described a new species of *Deloneura*, naming it *immaculata* (Trimen 1868 : 83, pl. 5, fig. 4). Aurivillius (1925 : 333–334) mistook Staudinger's remarks (Staudinger, 1888 : 268, pl. 94) concerning *immaculata* Trimen for an original description, transferring it to the genus *Liptena*. However, Aurivillius misidentified *immaculata* Trimen, and the insect to which he applied the name was in fact a specimen of *evanescens*. Two specimens in the BMNH collection agree with the brief description given by Aurivillius in the *Review*: 'Hindwing beneath with three very indistinct, fine, yellowish, postmedian transverse lines. Expanse of wings 27 to 28 mm.' The present authors consider the differences mentioned to be purely individual variation and sink *immaculata* sensu Aurivillius as a synonym of *evanescens*.

L. e. evanescens is recorded from Nigeria, Cameroun (Mamfe), and Fernando Po.

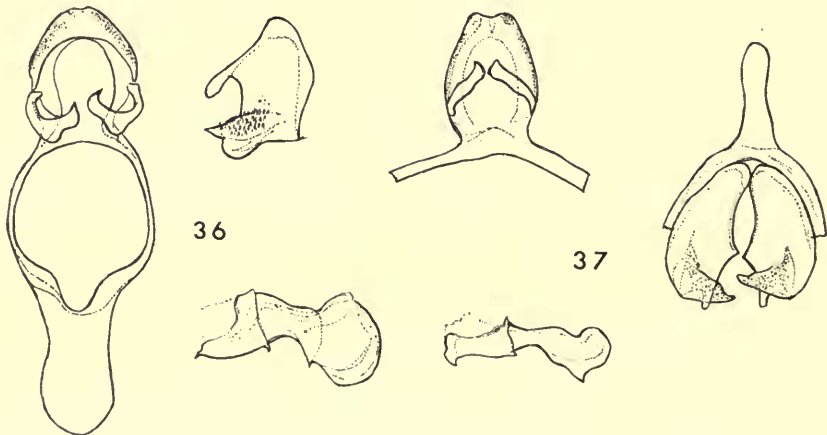


FIG. 36. *Liptena perobscura* Druce, ♂ genitalia.

FIG. 37. *Liptena evanescens* (Kirby), ♂ genitalia.

L. e. evanescens differs from *L. e. xanthis* by the following characters. The ground colour of both surfaces is much lighter, Nigerian specimens being a pale cream; there is little or no trace of an apical marking on the forewing upperside. In the BMNH series the expanse of *e. evanescens* varies from 25.5 to 28.0 mm in the males, and from 25.5 to 29.0 mm in the females. The size of *e. xanthis* ranges between 23.5 and 26.0 mm in the males, and between 24.5 and 27.5 mm in the females. Legs and palpi dark brown, antennae dark brown flecked with white beneath, the club tipped with dull orange.

♂ *genitalia*. Similar to those of *ochrea*. Uncus with a slight median depression in the distal margin. Tegumen oval. Subunci rather short and straight, slightly dilated distally and bearing a short hook at the tip. Vinculum of moderate width, prolonged by a saccus of medium length. Valvae rectangular, the broad dorsal process folded over the short ventral process. Aedeagus short and robust, dilated towards the rounded distal extremity and furnished with a large, strong tooth on the ventral surface.

MATERIAL EXAMINED.

♂ holotype, data given above.

NIGERIA: 2 ♀, Elele, Port Harcourt, -i.1959 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Ikom, Ogoja Province, -i.1956 (*T. H. E. Jackson*); 1 ♂, 1 ♀, Eket, southern Nigeria, 7.iii.1920, D. Cator coll.; 1 ♂, Aba, -iv.1937 (*T. H. E. Jackson*); 1 ♂, Aba (*G. W. Jefferey*); 1 ♀, Mamu Awka, Onitsha Province, -vi.1959 (*T. H. E. Jackson*); 2 ♂, Obubra, Abakaliki Province, -vii.1960 (*T. H. E. Jackson*); 1 ♂, Udi, Onitsha Province, -ix.1952 (*T. H. E. Jackson*); 1 ♀, Creek Town, southern Nigeria, i.x. 1920, D. Cator coll. CAMEROUN: 1 ♂, Mamfe, -vii.1956, (*T. H. E. Jackson*); 1 ♂, Port Victoria (*Capt. Fitz-Roy*). FERNANDO PO: 1 ♀, 3-4000 ft, -vi.1926 (*T. A. Barns*). GABON: 1 ♂, Ogowe, Godman & Salvin collection.

Liptena evanescens xanthis (Holland) stat. n.

Teriomima xanthis Holland, 1890 : 429. Numerous syntypes, probably of both sexes, GABON: upper R. Ogove (*A. C. Good*) (CM, Pittsburgh) [not examined].

Recorded from Ivory Coast, Ghana, Cameroun, Fernando Po, Sao Tomé, and Gabon. It has not been possible to examine Holland's types.

Although previously regarded as a synonym of *evanescens*, *xanthis* is here raised to subspecific rank. The status of *xanthis* is debatable as both *e. evanescens* and *e. xanthis* occur on Fernando Po; however, they do not seem sufficiently distinct to merit specific separation.

This insect can be distinguished from the typical form by its slightly smaller size and more yellow ground colour. *L. e. xanthis* usually has a brown patch towards the apex of the forewing upperside, but this varies in extent and does not quite reach the outer margin. There is a brown marginal line extending approximately to vein 3, and the base of the costa is brown.

L. e. xanthis is easily separated from *ochrea* as it lacks the dark costal band and large apical patch on the forewing upperside that are characteristic of *ochrea*.

Legs, palpi and antennae as in *e. evanescens*.

♂ *genitalia*. Hardly differ from those of *e. evanescens*.

♀. As the ♂, but slightly larger.

MATERIAL EXAMINED.

GHANA: 1 ♀, East Ashanti, -i.1910 (*G. C. Dudgeon*). CAMEROUN: 1 ♂, Epulan, south Cameroun, 15.iv.1926 (*G. Schwab*); 1 ♀, Port Victoria (*Capt. Fitz-Roy*); 1 ♀, Johann Albrecht's Hohe Station, 1898 (*L. Conradt*); 2 ♀, Bitje, Adams bequest; 1 ♂, Bitje. FERNANDO PO: 4 ♂, 8 ♀ (*Rev. W. Cooper*); 2 ♂, 1 ♀, end of wet season, 650 ft (*Rev. W. Cooper*); 1 ♂, 1 ♀, Sta Isabel, -v.1919 (*F. Escalera*); 1 ♂, as before, -iv.1919; 1 ♂, ditto, -viii. 1919; 2 ♂, ditto, -ix.1919 (*F. Escalera*). SAO TOMÉ: 2 ♀, 1926 (*T. A. Barns*). GABON: 1 ♂, Lake Azingo, 4.xii.1907 (*Dr Ansorge*); 1 ♀, Ogoewe, Godman & Salvin coll.; 2 ♀, Ogoewe, Rothschild bequest; 1 ♂, 2 ♀, Gaboon.

Liptena ochrea Hawker-Smith

(Pl. 5, figs 78, 81; Text-fig. 38)

Liptena ochrea Hawker-Smith, 1933: 8, ♀. Holotype ♀, CAMEROUN: Bitje, Ja River, 2000 ft, wet season, iv.-v. 1912 (*G. L. Bates*) (BMNH) [examined].

This rare species is allied to *evanescens* and *undina*, but is easily separated from the latter by the underside characters. The underside of *undina* has precise markings in shades of yellow-ochre, brown and cream, the apical region of the forewing being especially distinctive; on the hindwing the discoidal line is absent. In *ochrea* the entire underside is ochreous, including the apical region of the forewing, and the transverse lines are orange. Some specimens of *evanescens xanthis* resemble *ochrea* on the underside, but on the upperside the dark costal and apical markings are far less extensive.

Hawker-Smith's female type came from Bitje, Cameroun and is in the BMNH; in addition there is one male and one female from Etoumbi, Congo (Brazzaville) in the collection. The male of this pair is here described as a neallotype; although this male has more extensive dark areas on the upperside than the female holotype, this is believed to be due to the difference in the localities and sex. There is a further male from Etoumbi in the Coryndon Museum, Nairobi (Jackson coll.).

♂. *Upperside*. Ground colour of all wings ochreous. Forewing with the costa brown, broadening considerably towards the apex and extending down the outer margin to vein 3. Beyond the cell a crescentic spur projects from the costal band. There is a faint brown discoidal line. Hindwing with a brown discoidal line and scattered brown scaling near the anal fold.

Underside. Ground colour ochreous but paler than on the upperside. Forewing bears an orange line along the outer margin. There are two indistinct subapical orange lines, and a darker postdiscal line, curving around the cell from the costa. There is a dark orange discoidal line and some marks within the cell that are of the same hue. Hindwing with a strong orange line along the outer margin and two weaker submarginal ones. The dark orange postdiscal line of the forewing is continued across the hindwing. There is a discoidal line of the same colour and a basal line from the costa to the anal fold.

Length of forewing: 12 mm. Legs black; palpi brown, paler at base; antennae black with white flecking, the club tipped with dull orange-brown.

♂ *genitalia*. Uncus crescentic, with a fairly broad, shallow excision on the distal margin; tegumen oval. Subunci short, straight, somewhat dilated near the tip. Vinculum narrow

with a short, parallel-sided saccus. Valvae rectangular, with the dorsal process turned across the ventral and narrower one, both terminating in a bluntly rounded apex. Aedeagus short, slender centrally, then greatly dilated towards the distal extremity and with a marked bulge on the ventral margin.

MATERIAL EXAMINED.

♀ holotype, data given above.

CONGO (BRAZZAVILLE): ♂ neallotype, 'Etoumbi, Moyen Congo, Fr. Equat. Afr.', xii. 1958 (*T. H. E. Jackson*), dissection no. NHB 1968-2738, B.M. Type No. Rhop. 17290; 1 ♀, Etoumbi, -i. 1959 (*T. H. E. Jackson*).

Liptena bolivari Kheil

(Pl. 5, figs 79, 82; Text-fig. 39)

Liptena bolivari Kheil, 1905 : 173. ♂. Holotype ♂, EQUATORIAL GUINEA: Rio Muni (depository unknown).

The single male specimen described by Kheil was from Spanish Guinea, but the species has since been recorded from Nigeria, Cameroun and Gabon. A female neallotype is described here.

♀. *Upperside*. Ground colour ochreous, slightly darker than in *xanthostola* with which this species is often confused. Forewing with the base of the costa dusky. The internal border of the brown apical marking runs in an even curve from the costa to the outer margin and terminates at vein 2, thereby differing from that of *xanthostola* which often has a roughly toothed border and terminates abruptly. The hindwing shows traces of a fuscous marginal line on the lower part of the outer margin.

Underside. Ground colour bright ochreous. Forewing with a brown marginal line from the apex to vein 2. On the outer margin of the hindwing there are traces of a brown line at the vein endings.

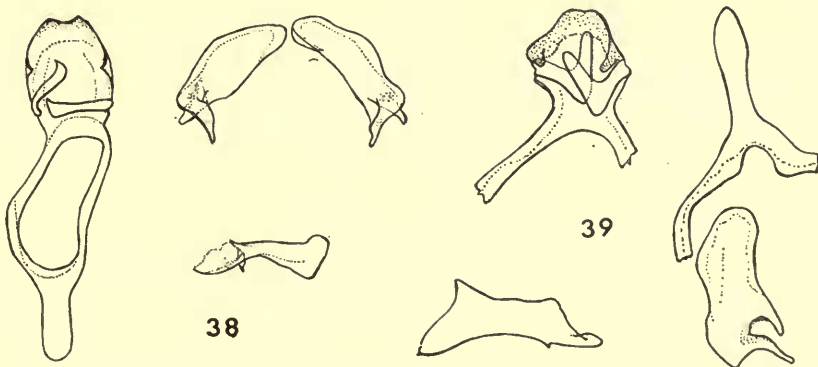


FIG. 38. *Liptena ochrea* Hawker-Smith, ♂ genitalia.

FIG. 39. *Liptena bolivari* Kheil, ♂ genitalia.

Length of forewing: 13 mm. Legs and palpi black; antennae black flecked with dull white.

♂ *genitalia*. Differ widely from those of *xanthostola*. Uncus in the form of a shallow cone with a small process parallel with each of the subunci. Subunci very robust, anvil-shaped. Vinculum moderately broad with a long saccus. Valvae rectangular; the distal border of the dorsal process depressed in its central portion, this process becoming narrower towards its tip; the ventral process shorter and broader. Aedeagus short and stout with a small tooth on the ventral surface and an obliquely cut tip.

MATERIAL EXAMINED.

NIGERIA: ♀ neallotype, Ikom, Ogoja Prov., v. 1957 (*T. H. E. Jackson*), B. M. Type No. Rhop. 17291; 1 ♂, Obubra, Abakaliki Province, -vii.1960 (*T. H. E. Jackson*); 1 ♂, Ubiaja, Benin Province, -viii.1955 (*T. H. E. Jackson*). CAMEROUN: 1 ♂, Johann Albrecht's Hohe Station, 1898 (*L. Conradt*); 1 ♂, ditto, 1896 (*L. Conradt*); 2 ♂, Mamfe, -xi.1956; 1 ♀, Mamfe, -vii.1956 (*T. H. E. Jackson*). GABON: 1 ♂, Sembe, Souanke District, -iii.1960 (*T. H. E. Jackson*).

Liptena undina (Grose-Smith & Kirby)

(Pl. 5, figs 89, 92; Text-fig. 40)

Pentila undina Grose-Smith & Kirby, 1894 : 117, pl. 25, figs 6, 7, ♂. Holotype ♂, ZAIRE: Kuilu (possibly in BMNH, see below).

This distinctive species does not appear to be closely related to any other in the genus. It is approximately the same size and colour as *xanthostola*. It occurs in Cameroun, Gabon, Congo (Brazzaville), and Zaire (Uele), and in Uganda.

Although Staudinger's types are believed to have been destroyed during the last world war, there is, in the BMNH collection, a pair of *undina* from Kuilu (the type-locality), collected by Mocquerys in 1892. The male of this pair is figured herein.

♂ *genitalia*. Uncus crescentic with a barely perceptible indentation at the apex. Subunci narrow, almost straight, with the terminal portion distended ventrally. Tegumen rectangular. Vinculum narrow with a long saccus of even width. Valvae roughly triangular, the dorsal process terminating in a small point, the ventral process triangular with a rounded apex. Aedeagus short and broad, with a blunt projection on the ventral margin near the extremity.

MATERIAL EXAMINED.

CAMEROUN: 1 ♂, Bitje, wet season (*G. L. Bates*); 2 ♀, 'Congo français', Joicey bequest. CONGO (BRAZZAVILLE): 1 ♀, Ketta Forest, -vi.1960 (*T. H. E. Jackson*); 1 ♀, Ketta Forest, Ouesso, -xi.1959 (*T. H. E. Jackson*); 1 ♀, Mambili, Ouesso, -vi.1960 (*T. H. E. Jackson*); 1 ♂, Etoumbi, -x.1960 (*T. H. E. Jackson*). ZAIRE: 1 ♂, 1 ♀, Kuilu, (*Mocquerys*), ex coll. Bethune-Baker; 1 ♂, 1 ♀, Kuilu (*Mocquerys*), 1892, Rothschild bequest. UGANDA: 4 ♂, 2 ♀, Budongo, -viii.-ix.1934 (*T. H. E. Jackson*); 1 ♂, Budongo, -ix.1934 (*T. H. E. Jackson*); 2 ♂, 6 ♀, Mpanga Forest, Toro, 4800 ft, 13-23.xi.1911 (*S. A. Neave*); 1 ♂, Katera, -xi.1933, (*T. H. E. Jackson*).

Liptena xanthostola (Holland)

Teriomima xanthostola Holland, 1890 : 429.

This species is known from Sierra Leone, Ivory Coast, Ghana, Rio Muni, Gabon, Zaire, Uganda, Kenya and the Sudan. It is easily confused with *bolivari*, *overlaeti* and *fontainei*, but can be positively identified by examining the male genitalia, which differ markedly between species. Externally, *bolivari* has a deeper ground colour than *xanthostola*, *overlaeti* is a larger insect, and *fontainei* possesses a larger apical patch on the forewing upperside than does *xanthostola*.

Liptena xanthostola xanthostola (Holland)

(Pl. 5, figs 90, 93)

Teriomima xanthostola Holland, 1890 : 429. Numerous syntypes, probably of both sexes, GABON: upper R. Ogove (*A. C. Good*) (CM, Pittsburgh) [not examined].

Recorded from Cameroun, Rio Muni, Gabon and Zaire. It has not been possible to examine the types, but specimens in the BMNH collection agree with Holland's description.

On the *upperside* the ground colour of all wings is yellow, the costal band is blackish brown and of uniform width and may be as broad as 1 mm. The blackish brown apical patch has an evenly curved internal edge and extends almost to the tornus. Traces of a marginal line, present as brown scales, are visible on the lower part of the outer margin of the hindwing, near the anal angle.

Underside ground colour as upperside, the costa is finely black and there are traces of a dark marginal and submarginal line on the forewing in the apical region.

Average length of male forewing: 13 mm. Legs and palpi blackish brown; antennae black, flecked with white beneath and having a pale tip to the club.

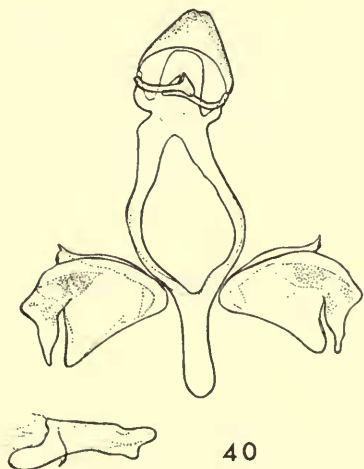


FIG. 40. *Liptena undina* (Grose-Smith & Kirby), ♂ genitalia.

♂ *genitalia*. Uncus triangular, subunci short and straight, dilated distally and bearing a short hook at the tip. Tegumen oval. Vinculum narrow with a saccus of medium length. Valvae rectangular with a triangular apex. Aedeagus small, the distal third angled and having a blunt tip.

MATERIAL EXAMINED.

CAMEROUN: 1 ♂, Johann Albrecht's Hohe Station, 1898 (*L. Conradt*); 1 ♀, Bitje, Ja River, 2000 ft, -iv-vi.1910, lesser rains (*G. L. Bates*). RIO MUNI: 1 ♂, Balengue, -vi.1919 (*F. Escalera*). GABON: 1 ♂, Lake Azingo, -xii.1907 (*Dr Ansorge*); 1 ♂, ditto, -ii.1908; 1 ♀, Ogowé, Lambar., 1892 (*Mocquerys*); 1 ♂, 1 ♀, Ogowé, ex Bethune-Baker coll. ZAIRE: 1 ♀, Kuilu, 1892 (*Mocquerys*).

Liptena xanthostola coomassiensis Hawker-Smith

Liptena xantha coomassiensis Hawker-Smith, 1933 : 8, ♂. Holotype ♂, GHANA: Friapere Forest, Kumasi (BMNH, dissection no. NHB 1968-2744) [examined].

This subspecies is represented by specimens from Guinea, Sierra Leone, Ivory Coast and Ghana.

On the *upperside*, *x. coomassiensis* differs from nominate *xanthostola* by its slightly paler yellow ground colour, and in the form and extent of the apical patch. The internal edge of the patch runs in an even curve from mid-costa tapering to terminate at vein 3 on the outer margin. The *underside* does not differ from that of *x. xanthostola*.

There is a slight difference in size, *x. coomassiensis* generally being the larger by 2 or 3 mm in overall expanse. The ♀ is generally a little larger than the ♂. Legs and antennae as in *x. xanthostola*; palpi yellow at base with blackish brown tips.

♂ *genitalia*. Similar to those of *x. xanthostola*.

MATERIAL EXAMINED.

♂ holotype, data given above.

GUINEA: 1 ♂, N'zérékoré, 1900 ft, 29.v.-7.vi. 1926 (*C. L. Collenette*). SIERRA LEONE: 1 ♂, Fula Wusu, 12.iv.1903; 1 ♂, Fula Wusu, 16.iv.1903, D. Cator coll. IVORY COAST: 1 ♂, 1 ♀, Bingerville, 1915 (*G. Melou*); 5 ♂, Ivory Coast, 1919 (*Cremer*). GHANA: 1 ♂, West Ashanti, 1.i.1910 (*G. C. Dudgeon*); 1 ♂, 2 ♀, Ashanti, -iii.1901 (*G. C. Dudgeon*); 1 ♀, 1909 (*Dudgeon*); 1 ♂, Volta River, Crowley bequest; 1 ♂, 1 ♀, Coomassie, Friapere Forest, 1913; 2 ♀, Coomassie, 21.ii.1913 (*J. D. G. Saunders*); 1 ♀, Western Province, under 100 ft, -iii.1928 (*M. Portal Hyatt*).

Liptena xanthostola xantha (Grose-Smith) *stat. n.*

(Pl. 5, figs 91, 94; Text-fig. 41)

Teriomima xantha Grose-Smith, 1901 : 140, pl. 29, figs 13, 14, ♂. Holotype ♂, UGANDA: Entebbe (BMNH) [examined].

Represented in the BMNH by specimens from Angola (?), Zaire, Uganda, Kenya, and Sudan. The type is in the BMNH collection, and agrees with Grose-Smith's figures.

On the *upperside* the amount of brown coloration along the costa of the forewing is variable. The internal edge of the apical patch is gently angled at vein 4, the patch extending down the outer margin to terminate at vein 2.

On the *underside* there is no dark border to the costa of the forewing. An extremely fine black line is visible on the base of the fringes in the apical area of the forewing. On all wings are a pair of yellow lines which are little more than an intensification of the ground colour, and run parallel to the outer margin of the wings. In some specimens three similar yellow, transverse lines are discernible on the hindwing.

Some variation is apparent within the subspecies, the Zairian specimens being a deeper and brighter yellow; the specimens from the Sudan are larger than other *x. xantha* (length of ♂ forewing: 16–17 mm). Normal length of ♂ forewing approximately 15 mm, *x. xantha* is thus a little larger than the other two subspecies. The ♀ is slightly larger than the ♂; length of forewing in the ♂ holotype is 15 mm. Legs, palpi and antennae as in the nominate subspecies.

♂ *genitalia*. Similar to those of *x. xanthostola*.

MATERIAL EXAMINED.

♂ holotype, data given above.

ANGOLA: 2 ♂, 1 ♀, Moxico District, Zambesi-Congo Divide, 4000 ft, south-east Angola, -x.1928 (*T. A. Barns*). ZAIRE: 4 ♂, 1 ♀, Itoa River, Ituri Forest, Congo-Semliki Watershed, -i.1920 (*T. A. Barns*); 1 ♂, nr Lesse, west Semliki river, -i.1920 (*T. A. Barns*); 1 ♂, middle Lowa valley, nr Walikali, 3–4000 ft, forest, -ii.1924, wet season (*T. A. Barns*); 1 ♂, south side of middle Lowa valley, south of Walikali, 3500 ft, forest, -iii.1924, wet season (*T. A. Barns*); 1 ♂, between Lindi and Lubila rivers, north of Batama, -iv.1920 (*T. A. Barns*); 1 ♂, west Semliki valley, 3500 ft, forest, -vi.1924 (*T. A. Barns*); 2 ♂, eastern upper Ituri valley, 30 miles south of Irumu, 3000 ft, tropical forest, -vii.1924 (*T. A. Barns*); 1 ♀, lower Butahu river, Semliki valley, Xmas 1919, (*T. A. Barns*); 1 ♂, Semliki, Joicey bequest; 2 ♂, Sandoa, 21.xi.1920; 1 ♀, Sandoa, 27.xi.1921; 1 ♂, Congo, 11–16.ix.1926 (*F. G. Jackson*); 1 ♂, Katana, W. Kivu, 5–7000 ft, highland forest bordering pastureland, beginning of wet season, -iv.1924 (*T. A. Barns*); 4 ♂, Katanga. UGANDA: the following specimens from Entebbe. 2 ♂, 12–20.i.1912 (*S. A. Neave*); 3 ♂, -iii-v.1895 (*F. J. Jackson*); 3 ♂, 3.v.1895 (*F. J. Jackson*) Gowley bequest; 1 ♀, -v.1900; 1 ♂, -v.1900 (*Capt. H. B. Ratray*); 1 ♂, -vi.1900, Joicey bequest; 1 ♂, 1 ♀, Entebbe Forest, 3800 ft, 5–11.vii.1911 (*S. A. Neave*); 1 ♂, 1 ♀, Entebbe Forest, Kitinda, -vii.1951 (*V. G. L. van Someren*); 1 ♀, Entebbe, -viii.1901 (*A. H. Neumann*); 1 ♂, 22.viii.1912 (*C. C. Gowdey*) 1 ♂, 1 ♀, -ix.1900 (*Capt. H. B. Ratray*); 2 ♂, 1–11.ix.1911 (*S. A. Neave*); 2 ♂, 1 ♀, -ix.1932 (*T. H. E. Jackson*); 2 ♂, 17–18.xi.1912 (*C. C. Gowdey*); 5 ♂, 1905 (*E. A. Minchin*); 1 ♂, Adams bequest; 2 ♂, 2 ♀, ex Bethune-Baker coll.; 1 ♀, Port Alice (Entebbe), 18.xi.1897 (*Dr Ansorge*); the following specimens from Bwamba: 10 ♂, -iv-xii.1942 (*T. H. E. Jackson*) 2 ♂, -vi.1942 (*T. H. E. Jackson*); 1 ♂, -vii.1942 (*T. H. E. Jackson*); 1 ♀, -vii.1944 (*T. H. E. Jackson*); 2 ♂, -vii-viii.1946 (*V. G. L. van Someren*); 10 ♂, -ix.1942 (*T. H. E. Jackson*); 5 ♂, -x.1942 (*T. H. E. Jackson*); 5 ♂, Bwamba Forest, Semliki valley, 2300–2800 ft, 3–7.xii.1911 (*S. A. Neave*); 1 ♀, Buvuma Island, 22.iv.1905 (*Dr C. Christy*); 1 ♂, Toro, -vi.1940 (*T. H. E. Jackson*); 1 ♂, Katera Forest, Masaka, -x,-xi.1953 (*V. G. L. van Someren*); 1 ♀, ditto, -x-xi.1956; 1 ♂, Katera, -x.1932 (*T. H. E. Jackson*); 1 ♂, ditto, -xi.1933; 2 ♂, Bukakata, Masaka road, forest,

17.i.1912 (*F. J. Jackson*); 1 ♂ western Ankole, 4500–5000 ft, 10–14.x.1911 (*S. A. Neave*); 1 ♂, Ankole-Toro border, east of L. George, 4500 ft, 20–21.x.1911 (*S. A. Neave*); 4 ♂, 1 ♀, Mpanga Forest, Toro, 4800 ft, 13–23.xi.1911 (*S. A. Neave*). 2 ♂, 3 ♀, south of Lake George, 3200–3400 ft, 17–19.x.1911 (*S. A. Neave*). the following specimens from Kayonza Forest, Kigezi: 2 ♂, 1 ♀, –.vi.1951 (*van Someren*). 1 ♂, –.v-vi.1957 (*van Someren*); 2 ♂, –.ix.1952; 1 ♂, 1 ♀, –.viii.1951; 1 ♀, –.x.1953 (all collected by *V. G. L. van Someren*); 1 ♀, Mitano river forest, Kigezi, –.vi.1951 (*V. G. L. van Someren*); 1 ♀, Katera Forest, Mbarara, –.xi-xii.1951 (*van Someren*); 2 ♂, 1 ♀, between Mitiana and Entebbe, 3800 ft, 9–11.i.1912 (*S. A. Neave*); 1 ♀, Kampala, –.ii.1900, (*Capt. H. B. Rattray*); 1 ♀, ditto, –.iii.1900; 2 ♂, between Seziwa River and Kampala, 3500–3750 ft, 27–31.viii.1911 (*S. A. Neave*); 1 ♂, Kampala, –.xi.1933 (*T. H. E. Jackson*); 1 ♂, Unyoro, Budongo Forest, cool & dense, 3400 ft, 15.xii.1911 (*S. A. Neave*); 2 ♂ Budongo, –.vii-ix.1934 (*T. H. E. Jackson*); 2 ♂, Kamengo, Mawakota, –.ix.1953 (*V. G. L. van Someren*), 1 ♂, 1 ♀, Kamengo, Mawakota, –.viii.1953 (*van Someren*); 1 ♂, Kamengo, –.i.1935 (*T. H. E. Jackson*); 1 ♂, Kibali Forest, Toro, 5.vi.1956 (*van Someren*); 2 ♂, Kalinzu, –.ix.1948 (*van Someren*); 1 ♂, Marabigambo Forest, Lake Edward, –.ii.1956 (*T. H. E. Jackson*); 1 ♀, Mabira Forest, Chagwe, 3500–3800 ft, 16–25.vii.1911 (*S. A. Neave*); 1 ♂, Mulange, 30.v.1922 (*R. A. Dummer*); 2 ♂, 1 ♀, Mabira Forest, Kyagive, Mulange, 4000 ft (*R. A. Dummer*); 2 ♀, ditto, –.iv.–viii.1919; 3 ♂, 1 ♀, W. shores of Vic. Nyanza, Buddu, 3700 ft, 19–25.ix.1911 (*S. A. Neave*); 1 ♂, west shores of Vic. Nyanza, Buddu, 3700 ft, large forest, flat and sandy country, 19.i.1911 (*S. A. Neave*); 1 ♂, north-west shores of Vic. Nyanza, 3800–3900 ft, 12–15.ix.1911 (*S. A. Neave*); 1 ♂, Lake Albert Nyanza, Adams bequest. KENYA: 1 ♀, S. Kavirondo, –.iv.1932 (*V. G. L. van Someren*); 1 ♀, ditto, –.ix–xi.1932 (*van Someren*); 1 ♂, Ebua River Forest, Suna, S. Kavirondo, –.vi.1947 (*van Someren*); 1 ♂, Suna Kissii District, Kenya, –.vi.1947 (*T. H. E. Jackson*). SUDAN: 3 ♂, 2 ♀, Tambura, southern Bahr-el-Ghazal.

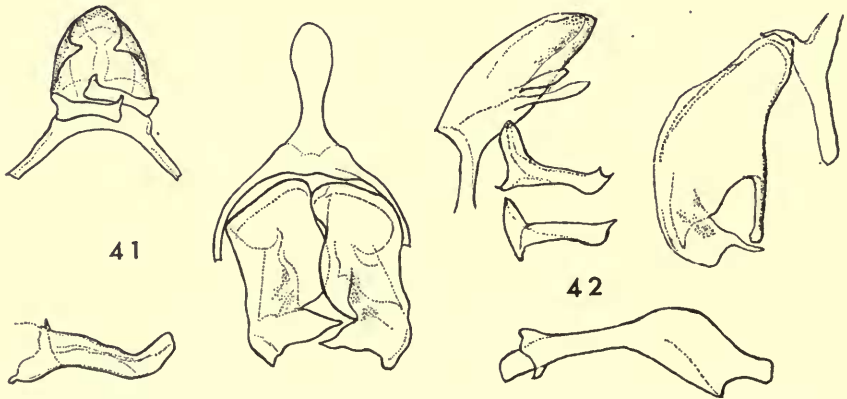


FIG. 41. *Liptena xanthostola xantha* (Grose-Smith), ♂ genitalia.

FIG. 42. *Liptena overlaeti* sp. n., ♂ genitalia.

***Liptena overlaeti* sp. n.**

(Pl. 5, figs 95, 96; Text-fig. 42)

This species resembles *xanthostola xantha* in facies, but the distinctive male genitalia easily distinguish it from *x. xantha* or any other *Liptena* species.

♂. *Upperside*. Ground colour paler than in *x. xantha*. Forewing with the costa brown throughout its length, the apical marking extending down the outer margin to terminate abruptly between veins 2 and 3, this being the only marking on the upperside.

Underside. Ground colour paler than that of *x. xantha*. There is a fine, dark, outer marginal line corresponding to the apical patch of the upperside. Wings immaculate.

Length of forewing: 16.5 mm, expanse 31 mm; this is slightly larger than that shown by specimens of *x. xantha* from the same locality. Legs and palpi as in *x. xantha*; antennae with the tip of the club black, which in *x. xantha* is yellow.

♂ *genitalia*. Uncus large and oval with a process on either side, stretching outwards parallel with the subunci; subunci curved, longer than those of *xanthostola*, and in this example asymmetrical. Vinculum narrow. Valvae oval, the dorsal process ending in a long, curved projection, the ventral process digitate. Aedeagus of unusual shape – the proximal extremity is squarely cut and the basal half is greatly enlarged, while the distal half is cylindrical.

♀. Unknown.

MATERIAL EXAMINED.

Holotype ♂, ZAIRE: Katanga, Kapanga, -x.1932 (*F. G. Overlaet*) (in coll. H. Stempffer).

***Liptena fontainei* sp. n.**

(Pl. 6, fig. 97; Text-fig. 43)

A single male of this new species was discovered by M. Stempffer among a series of *x. xantha*, collected from Paulis by Dr M. Fontaine, and in the collection of the MRAC Tervuren.

♂. *Upperside*. Ground colour sulphur yellow. Forewing with the broad black costal band invading the upper part of the cell; the black apical patch is larger than that of *x. xantha* and terminates abruptly between veins 2 and 3 on the outer margin; the inner edge of the patch is slightly irregular. Hindwing immaculate.

Underside. Ground colour slightly paler than on upperside. Forewing with a fine, black, marginal line from the apex down to vein 2. Hindwing immaculate. Fringes yellow.

Length of forewing: 12.5 mm, expanse 23.5 mm. Legs black with some yellow scales; palpi black with a fine yellow line beneath, up to the tip; antennae black, yellow-ringed, the club elongate and black.

♂ *genitalia*. Uncus trapezoidal, with a rounded depression in the distal margin; either side of the uncus bears a curved process parallel to the subunci, as in *overlaeti*; subunci stout, anvil-shaped – rather reminiscent of those of *bolivari*. Vinculum rather narrow. Valvae rectangular, the dorsal process ending in a curved blunt point, the ventral process very short and stumpy. Aedeagus of distinctive shape – rather like a boomerang – long and arched, swollen centrally and with an acute tip.

♀. Unknown.

MATERIAL EXAMINED.

Holotype ♂, ZAIRE: Uele, Paulis, 26.vii.1956 (*Dr M. Fontaine*) (in collection of MRAC, Tervuren.)

Liptena homeyeri Dewitz

Liptena homeyeri Dewitz, 1884 : 188, pl. 1, figs 3, 3a.

L. homeyeri is one of the larger species of *Liptena*. It reaches its greatest size in Zaire, where it is usually approximately 40 mm in the male, 45 mm in the female. The upperside markings are reminiscent of those of *ferrymani*, but the unusual markings of the underside have no parallel with any other species included here.

Liptena homeyeri homeyeri Dewitz

(Pl. 6, figs 98, 99)

Liptena homeyeri Dewitz, 1884 : 188, pl. 1, figs 3, 3a. Type(s), 'WESTAFRIKA' (depository unknown).

Recorded from Zaire, south-eastern Angola, Rhodesia and Tanzania.

♂ *genitalia*. Uncus in the form of a truncated cone with a slight median depression; subunci long, curved and uniformly slender. Tegumen oval. Vinculum of moderate width with a short, broad saccus. Valvae rectangular, the dorsal process with a rounded apex and a long, fine lateral projection, the ventral process reduced to a broad, rounded lobe. Aedeagus long, very slightly arched with an obliquely cut tip.

MATERIAL EXAMINED.

ZAIRE: 1 ♀, Lualaba R. (*A. Yale Massey*); 1 ♂, Lualaba valley, Kansanishi, -.iii.1906, Adams bequest; 1 ♀, Lualaba River, 2500-4000 ft, 20.v.1907, Neave coll.; the following specimens from Riuwe, 5000 ft, Lualaba valley: 2 ♂, 23.iii.1906; 1 ♂, 22.iii.1906; 3 ♂, 1 ♀, 26.iii.1906; 2 ♂, 28.iii.1906; 1 ♂, 4.iv.1906; 1 ♀, Katanga district, nr Riuwe, about 15 miles west of Lualaba River, 10°45' S., 3000 ft, 1.v.1904 (*H. Cookson*); 1 ♂, Lufira valley, -.xi-xii.1918 (*T. A. Barns*); 3 ♂, Panda R., Lufira

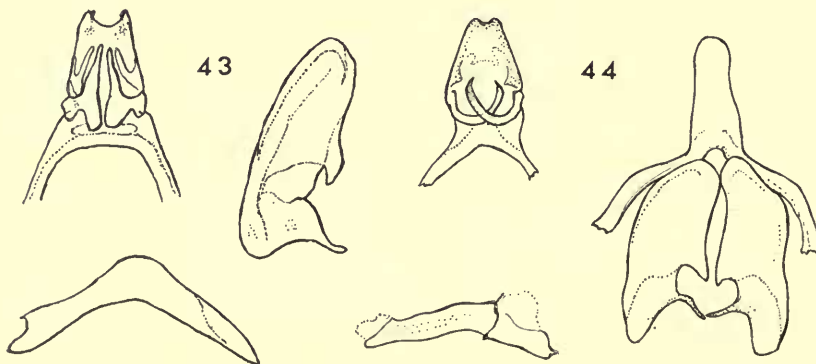


FIG. 43. *Liptena fontainei* sp. n., ♂ genitalia.

FIG. 44. *Liptena homeyeri straminea* subsp. n., ♂ genitalia.

valley, -v.1919 (*T. A. Barns*); 1 ♂, Kikura stream, Lufira valley, 15.iv.1919 (*T. A. Barns*); 2 ♀, Kolwezi, Katanga, -iv.1959 (*R. H. Carcasson*); 1 ♂, Katanga, upper Dikulwe valley, 4000 ft, 21.iii.1907, (*S. A. Neave*); 1 ♂, Katanga, upper Dikulwe valley, 4000 ft, 22.iii.1907 (*S. A. Neave*); 5 ♂, 9 ♀, Katanga, Joicey bequest; 1 ♂, Katanga, 1924 (*T. H. E. Jackson*); the following specimens from Kambove, Katanga, 4-5000 ft, all from the Neave collection: 1 ♀, 3.iv.1907; 1 ♂, 20.iii.1907; 3 ♂, 1 ♀, 25.iii.1907; 2 ♂, 21.iii.1907; 2 ♂, Luvua River, east bank, 85 miles north of Lake Mweru, about 3000 ft, -iv.1922, end of wet season (*T. A. Barns*); 1 ♀, Katanga district, between Lunganda and Lbwita R., 3000 ft, 21.xi.1903 (*H. Cookson*); 2 ♂, Luajoula valley, -xii.1917 (*T. A. Barns*); 1 ♂, Mwene-Mukoji, 31.iii.1921; 1 ♂, Sandoa, 18.x.1920, Rothschild bequest; 1 ♂, Huapulaku, -xii.- (*T. A. Barns*). ANGOLA: 5 ♂, Zambesi-Congo Divide, Moxico district, south-eastern Angola, 4000 ft, -x.1928 (*T. A. Barns*); 1 ♂, Zambesi-Kasai Watershed, south-eastern Angola, 4000 ft, -x.1928 (*T. A. Barns*). RHODESIA: 2 ♂, north-west Rhodesia, Joicey bequest; 3 ♂, 4 ♀, ditto (*H. Cookson*); 2 ♀ ditto (*H. C. Dollman*); 1 ♀, Chambesi, northern Rhodesia, 22.iv.1917 (*T. A. Barns*); the following specimens from Solwezi: 4 ♂, 1 ♀, -iii.1917, ex Bethune-Baker coll.; 2 ♂, 16.iii.1917, ex Bethune-Baker coll.; 1 ♂, Solwezi, 26°20' E., 12°10' S., 4.iv.1917 (*H. C. Dollman*); 1 ♂, 6.iv.1917 (*H. C. Dollman*); 1 ♂, Solwezi district, 26°20' E., 12°10' S., -xii.1916 (*H. C. Dollman*). TANZANIA: 2 ♂, 5 ♀, Region de M'pala (*R. P. Guilleme'*).

Liptena homeyeri straminea subsp. n.

(Pl. 6, figs 100, 101; Text-fig. 44)

A series of 36 specimens in the BMNH collection show constant differences from the typical examples of *homeyeri*. All dark markings on both surfaces are less extensive.

♂. *Upperside*. Ground colour orange-yellow - markings dark brown. Forewing with a fuscous suffusion at base of costa, the apical patch covering the distal third of the costa and extending down the outer margin to vein 4, continuing very narrowly to vein 3. The internal edge of the apical patch is irregular. A small projection from the costa, just beyond the end of the cell, is very faint in the type-specimen but quite distinct in some other males of the series. On the hindwing the markings of the underside are just visible through the wing.

Underside. Ground colour as upperside - markings black. Forewing with the distal third of the costa black, and a black outer marginal line which terminates at vein 3. There is an oblique subapical band, which is much narrower than in typical *homeyeri*. The projection from the costal band is more heavily marked than on the upperside. Hindwing with the markings more reduced than in the nominate subspecies. There are three spots in cell space 1 parallel with the anal fold, a further three spots are all that remain of a postmedian transverse row, and a larger spot in cell space 7, posterior to the costal vein. Apart from the more restricted markings, *h. straminea* can be positively separated from *h. homeyeri* by the following marking on the hindwing underside: in *h. homeyeri* there are always two black spots near the costa, one midway along, the other more basal; in all our specimens of *h. straminea* this more basal spot of the two is entirely absent.

Length of forewing: 20 mm. Legs orange; palpi black, with the inner surface orange; antennae black, flecked with white beneath, the club tipped with orange-brown.

♂ *genitalia*. Do not differ from those of the typical form.

♀. Size and markings as in male.

MATERIAL EXAMINED.

Holotype ♂, ANGOLA: Bange Ngola, 5.x.1903 (*Dr Ansorge*), B.M.Type No. Rhop. 17292.

Paratypes. ANGOLA: allotype ♀, Bange Ngola, 7.x.1903 (*Dr Ansorge*), B.M. Type No. Rhop. 17293; 4 ♂, as holotype; 3 ♂, as allotype; 1 ♂, same locality and collector, 6.x.1903; 1 ♂, ditto, 9.x.1903; 15 ♂, Samba Acenda, 14.x.1903 (*Dr Ansorge*); 4 ♂, Chissamba, Bihé, 19.xi.1904 (*Dr Ansorge*); 1 ♂, Duque de Braganza, 28.x.1903 (*Dr Ansorge*); 1 ♂, Quango, Suffert coll.; 1 ♂, Prov. Lunda, Xassengue, 7.iv.1937 (*M. A. Excell*); 1 ♂, Prov. Lunda, Cucumbi, 30.iii.1960 (*Père Mercier*), in Stempffer coll.; 1 ♂, Pedreira, Bihé, 7.xi.1904 (*Dr Ansorge*); 1 ♂, Ceramba, Bihé, -.iii.1903 (*W. C. Bell*); 1 ♀, Pungo Andongo, 1.vii.1903 (*Dr Ansorge*).

Liptena rochei Stempffer

(Pl. 6, fig. 102; Text-fig. 45)

Liptena rochei Stempffer, 1951 : 66, fig. 1, ♂♀. Holotype ♂, NIGERIA: Lagos, vi. 1950 (Stempffer coll.) [examined].

This species is allied to *flavicans* but differs from it by its smaller size and by the ground colour, which is yellowish orange on both surfaces. On the hindwing underside the brown markings are less extensive. The female usually has a slightly paler ground colour than the male.

L. rochei occurs in Sierra Leone, Liberia, Ivory Coast, Ghana and Nigeria. Examples from Ivory Coast are more orange than those from Nigeria, specimens from Ghana being intermediate.

♂ *genitalia*. Uncus crescentic with a shallow depression in the distal margin; subunci distinctive, their distal third divided into two processes. Tegumen oval. Vinculum narrow, prolonged by a long, slender saccus. Valvae rectangular; the dorsal process broad and produced into a hook at the tip; the ventral process more slight, of equal length but curved at the extremity. Aedeagus long and very slender, curved at the tip.

MATERIAL EXAMINED.

♂ holotype, data given above.

SIERRA LEONE: 2 ♂, 1 ♀, Mabang, 26.xii.1903, D. Cator coll.; 3 ♂, 1 ♀, ditto, 27.xii.1903; 1 ♂, 2 ♀, ditto, 28.xii.1903. LIBERIA: 2 ♂, 1 ♀, Kpaine, 1400 ft, 7°10' N. 9°7' W., 18.iii.1954 (*Dr W. Peters*). GHANA: 1 ♀, Accra, Rothschild bequest; 1 ♂, Assesewase, -.iii.1906 (*G. C. Dudgeon*); 2 ♂, Aburi, 14.iv.1941 (*K. M. Guichard*); 2 ♂, Friapere Forest, Coomassie, 1913; 1 ♂, Joicey bequest. NIGERIA: 1 ♀, Otta, Lagos, -.i.1953 (*P. Roche*); 1 ♀, Isheri, Lagos, southern Nigeria, 12.iii.1950 (*P. Roche*); 1 ♀, Lagos district, -.vii.1947 (*P. G. L. Roche*); 2 ♂, Ubiaja, Benin Prov., -.vii.1955 (*T. H. E. Jackson*).

Liptena flavicans (Grose-Smith & Kirby)

Pentila flavicans Grose-Smith & Kirby, 1891 : 50, pl. 12, figs 5-8.

This species occurs in Liberia, Ivory Coast, Nigeria, Cameroun, through the Congo basin, and in Uganda. The only other *Liptena* species of similar appearance is *rochei*, which is found from Sierra Leone eastwards as far as Nigeria. *L. rochei* is a smaller species and is easily recognized by the rectangular costal blotch on the hindwing underside; in addition, the male genitalia show marked differences.

Liptena flavicans flavicans (Grose-Smith & Kirby)

(Text-figs 46, 47c)

Pentila flavicans Grose-Smith & Kirby, 1891 : 50, pl. 12, figs 5-8, ♂ ♀. ♂, ♀ types, CAMEROUN: Barombi (probably destroyed).

Recorded from west and south Cameroun.

On the upperside the costa in most specimens is fuscous throughout its length. The outer margin of the hindwing bears an irregular brown band. On the hindwing underside a break in the transverse brown bars allows the fusion of two patches of yellow ground colour.

The type of *flavicans* was in the Staudinger collection and is presumed destroyed in the last world war. There is no syntype available, and as the species was well illustrated in the original description it is not considered necessary to designate a neotype.

This species is subject to a fair degree of individual variation.

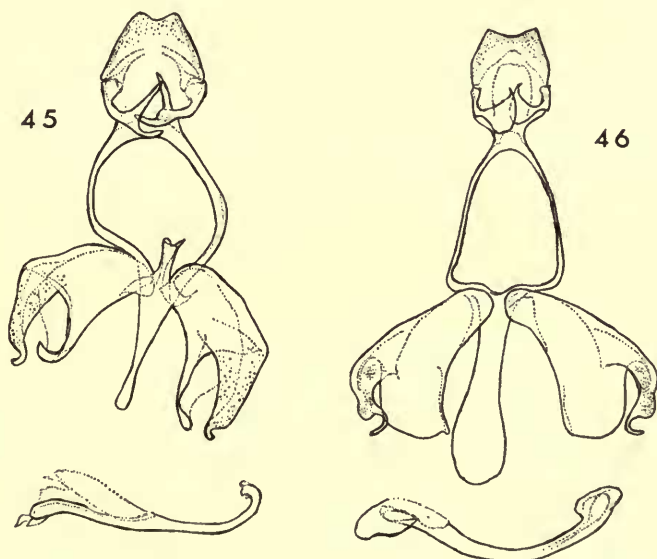


FIG. 45. *Liptena rochei* Stempffer, ♂ genitalia.

FIG. 46. *Liptena flavicans flavicans* (Grose-Smith & Kirby), ♂ genitalia.

♂ *genitalia*. The genitalia of the subspecies are identical. Uncus crescentic, slightly excised at the distal margin. Subunci short, strongly dilated. Tegumen oval. Vinculum narrow with a long, spatulate saccus. Valvae broad, the dorsal process ending in a hook, the ventral process wide with a rounded apex. Aedeagus long and slender, curved, and dilated towards the tip.

MATERIAL EXAMINED.

CAMEROUN: the following specimens from Bitje, Ja River, 2000 ft: 1 ♂, 1.ii.1920 (*G. L. Bates*); 1 ♂, 1.ii.1921 (*G. L. Bates*); 1 ♀, -i-iii.1907, dry season (*G. L. Bates*); 1 ♂, -iv.- (*G. L. Bates*); 5 ♂, -iv-vi.1910, lesser rains (*G. L. Bates*); 2 ♂, 2 ♀, -iv-v.1909, wet season; 2 ♂, 1 ♀, early v. and vi, wet season; 2 ♂, 1 ♀, 4.v.1912, wet season (*G. L. Bates*); 2 ♂, -vi. and vii.1909, ex coll. Ed Brabant; 1 ♂, -vi-vii 1909, Adams bequest; 3 ♂, -vi-vii.1909, dry season, ex Bethune-Baker coll.; 2 ♂, -ix.1908, ex Bethune-Baker coll.; 1 ♂, -x.1907, Adams bequest; 1 ♀, -x.1908, Adams bequest; 5 ♂, -x.1909; 2 ♂, 2 ♀, -ix-x-xi.1911; 1 ♂, 1 ♀, -x, xi.1912; 4 ♂, -x-xi.1913, wet season; 1 ♀, -xi.1909; 2 ♀, Bitje, 3°N., 12°E., wet season, 1926 (*G. L. Bates*); 14 ♂, 8 ♀, Bitje, little other data.

Liptena flavicans oniens Talbot

(Text-fig. 47b)

Liptena flavicans subsp. *oniens* Talbot, 1935 : 72, pl. 1, fig. 6, ♂♀. Holotype ♂, NIGERIA: 70 miles E. of Lagos, in forest 1 mile E. of Oni, 10.iii.1912 (*W. A. Lamborn*) (UM, Oxford) [examined].

Recorded from Liberia, Ivory Coast, Nigeria and west Cameroun.

On the upperside the ground colour is a paler yellow than in typical *flavicans*, and the apical marking is more reduced. On the forewing the proximal half of the costa is yellow. On the lower part of the hindwing the outer margin bears an irregular brown band. On the hindwing underside the brown bars in the upper part of the median area have disappeared, leaving a conspicuous patch of yellow ground colour.

MATERIAL EXAMINED.

♂ holotype, data given above.

LIBERIA: 1 ♂, 30 miles east of Monrovia, 200 ft, -ii.1926, dry season (*M. Portal Hyatt*). NIGERIA: 1 ♂, Akpabuyo, southern Nigeria, -i.1921, D. Cator coll.; 1 ♂, ditto, -ii.1921; 3 ♂, Oban, -i.1921, D. Cator coll.; 2 ♂, 1 ♀, Ikom, Ogoja Prov., -ii.1956 (*T. H. E. Jackson*); 2 ♂, ditto, -i.1956; 1 ♂, Ikom, Ogoja Province, -x.1955 (*T. H. E. Jackson*); 1 ♂, Oshodi, Lagos district, -iv.1955 (*T. H. E. Jackson*); 1 ♂, Ilaro, Lagos District, -iv.1955 (*T. H. E. Jackson*); 1 ♂, Uwet, southern Nigeria, -v.1920, D. Cator coll.; 1 ♂, Ubiaja, Benin Province, -vi.1955 (*T. H. E. Jackson*); 1 ♂, Eket, southern Nigeria, -ix.1920, D. Cator coll.; 1 ♂, Mamu Awka, Onitsha Province, -xi.1959 (*T. H. E. Jackson*); 1 ♂, Elele, Port Harcourt, -xii.1958 (*T. H. E. Jackson*); 2 ♂, Gregiani (*Dr Ansorge*). CAMEROUN: 1 ♂, Mamfe, -i.1957,

(*T. H. E. Jackson*); 2 ♂, ditto, -vii.1956; 2 ♂, Johann Albrecht's Hohe Station, 1896 (*L. Conradt*); 1 ♂, ditto, 1898; 1 ♂, Bitje, Ja River, -xi.1909, ex Bethune-Baker coll.

Liptena flavicans praeusta Schultzze

(Pl. 6, figs 103, 106; Text-fig. 47a)

Liptena flavicans var. *praeusta* Schultzze, 1917 : 38, ♂♀. LECTOTYPE ♂, CAMEROUN: N'ginda, 21.xi.1910 (*A. Schultzze*) (ZSBS, Munich), here designated [examined].

Range: south Cameroun and Congo Basin. In the original description Schultzze says that *praeusta* is found in the whole of the Congo Basin. He was correct in his assumption for we have specimens from Etoumbi and Ouesso, and from as far east as Beni, Ituri district. There is a syntype, which is here designated the lectotype, in the ZSBS, Munich.

♂. *Upperside*. Differs from other subspecies of *flavicans* by having a deeper ground colour; it is a glowing orange which is especially intense on the forewing. The brown costal band has a triangular extension at the end of the discoidal cell, and the apical marking is a little more extensive than in typical *flavicans*. The outer margin of the hindwing bears a brown band from vein 4 to the anal angle.

Underside. The hindwing shows regular brown bars of uniform width on the yellow ground. Other features as in *f. flavicans*. Legs orange with scattered fuscous scales on the femoral and tibial portions, ringed with fuscous on the tarsi.

Length of forewing: 18 mm. Palpi orange with black tips. Antennae black with orange-tipped clubs, and with pale markings between the annuli on the ventral and lateral surfaces.

MATERIAL EXAMINED.

Lectotype ♂. CAMEROUN: 'Süd-Kamerun N'ginda (*Dr Arnold Schultzze*), 21.xi.1910', '*L. flavicans* v. *praeusta* Schultzze, Dr Arn. Schultzze determ. 1920 ♂.'

CONGO (BRAZZAVILLE): 2 ♂, Etoumbi, -i.1959 (*T. H. E. Jackson*); 1 ♂, ditto, -vii.1960; 1 ♀, ditto, -xii.1958; 1 ♂, Ketta Forest, Ouesso, -ix.1959 (*T. H. E. Jackson*); 1 ♂, ditto, -x.1959. ZAIRE: 1 ♂, Beni, Ituri, 4000 ft, -iii.1947 (*T. H. E. Jackson*); 1 ♂, ditto, -x.1946; 1 ♀, ditto, -xi.1946.



FIG. 47. Underside hindwing detail of *Liptena flavicans* subspecies:

(a) *praeusta*, (b) *oniens*, (c) *flavicans*, (d) *katera*.

Liptena flavicans aequatorialis Stempffer

Liptena flavicans aequatorialis Stempffer, 1956 : 8, pl. 2, figs 3, 4, ♂. Holotype ♂, ZAIRE: Eala, Tshuapa (MRAC, Tervuren) [examined].

The type-locality is in Zaire, near Coquilhatville.

In *f. aequatorialis* there is no brown outer marginal band on the hindwing upperside, as there is in the other subspecies. The design of the barring on the hindwing underside is similar to that of *f. praeusta*, but the dark coloration is purplish wine instead of fuscous. The upperside ground colour is yellowish orange. A female specimen in the MRAC, Tervuren, is now designated as the neallotype. The external features are as in the male, and the expanse is 36 mm.

MATERIAL EXAMINED.

♂ holotype, data given above.

ZAIRE: ♀ neallotype, Eala, Tshuapa, vi. 1936 (*J. Ghesquière*).

Liptena flavicans katera Stempffer

(Text-fig. 47d)

Liptena flavicans katera Stempffer, 1956 : 8, pl. 2, figs 5, 6, ♂♀. Holotype ♂, UGANDA: Katera, xi. 1953 (BMNH) [examined].

The ground colour of the upperside is yellow, but is paler than in other subspecies. Forewing with a brown costal band, the apical marking angled and not very large. The outer margin of the hindwing bears sparse fuscous scaling. On the underside the ground colour of the hindwing is very pale – almost white – the dark bars in the median area are rather narrow but complete. Length of forewing: ♂ 17 mm, ♀ 19 mm.

MATERIAL EXAMINED.

The type-series is the only material available.

Liptena durbania Bethune-Baker

(Pl. 6, figs 104, 107; Text-fig. 48)

Liptena durbania Bethune-Baker, 1915 : 189, ♂. Holotype ♂, CAMEROUN: Bitje, Ja River, 2000 ft, x-xi. 1912 (BMNH) [examined].

Liptena rectifascia Hawker-Smith, 1933 : 8, ♂. Holotype ♂, CAMEROUN: Bitje, early May and June, wet season (BMNH) [examined].

The short series in the BMNH collection shows the following characters.

Upperside. Ground colour deep tawny-orange. Forewing with a broad, dark brown costal stripe which extends inwards to vein 6. The border of the apical patch is convex and the patch extends down the outer margin as far as vein 3; a dark brown marginal line continues to the tornus. The hindwing is without markings except for traces of a brown marginal line.

Underside. Ground colour of forewing orange, paler than on the upperside. Irregular brown and fawn bands are present in the apical area. An oblique stripe, 1.5 mm in breadth,

arises from the costa at the end of the discoidal cell. Hindwing fawn, marked by irregular brown bands.

♂ *genitalia*. Uncus bearing two blunt lobes separated by a deep concavity. Subunci slender, tapering to a point. Below the insertion of the subunci the uncus is expanded to form 'shoulders'. Vinculum broad with a short, narrow saccus. Valvae triangular, the dorsal process with the tip curved upwards; ventral process narrow. Aedeagus curved, dilated at the base, distal half slender.

MATERIAL EXAMINED.

♂ holotypes of *durbania* and *rectifascia*, data given above.

CAMEROUN: 1 ♂, as *durbania* type; 1 ♂, Bitje, -x & xi. 1910; 1 ♀, Bitje, Ja River, -ix-x-xi. 1911, Rothschild bequest. GABON: 1 ♀, Sembe, Souanke district, -ii. 1960 (*T. H. E. Jackson*).

Liptena bergeri sp. n.

(Text-fig. 49)

We have pleasure in naming this insect after Mr L. A. Berger of the MRAC, Tervuren.

A single male of this new species was discovered in the MRAC, Tervuren, by M. Stempffer. In facies it is hardly distinguishable from *durbania*, but is easily separable on genitalic characters.

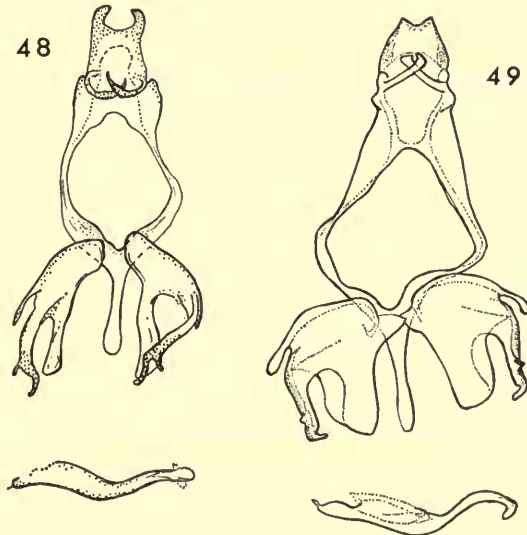


FIG. 48. *Liptena durbania* Bethune-Baker, ♂ genitalia.

FIG. 49. *Liptena bergeri* sp. n., ♂ genitalia.

♂. *Upperside*. Ground colour deep orange. Forewing with a dark brown costal stripe, which is slightly excised at the end of the discoidal cell, but gradually widens into the apical patch. The patch extends down the outer margin, tapering to terminate at vein 3. Hindwing without markings, but a few scattered fuscous scales are present in the anal fold. Fringes of all wings dark brown.

Underside. Ground colour of forewing orange, of a lighter tone than on the upperside and slightly paler towards the inner margin. The apical area is marked by indistinct fawn and light brown bands, as in *durbania*. There is an oblique light brown stripe from the costa at the end of the discoidal cell and a discoidal line of the same hue. Hindwing ground colour fawn with the following light brown markings: two complete submarginal bands which appear somewhat blurred, basad to these are two irregular bands which are slightly broader and are broken at vein 6; a more distinct discoidal stripe, followed by a further two marks within the cell. Other vague marks are present in the basal area of the wing.

Length of forewing: 16 mm. Legs light fawn with black markings, the unguae black; antennae black, flecked with white, the club orange dorsally.

♂ *genitalia*. Uncus widely excised at the distal margin, very distinct from that of *durbania*. Subunci slender and straight, hooked at the tip. Vinculum broad, saccus narrow and only lightly chitinized. Valvae approximately triangular, much broader than those of *durbania*; the dorsal process bears a digitate projection at its origin, also a tooth-like projection is present towards the tip; the slender tip is curved downwards; the ventral process is massive and evenly rounded distally, unlike that of *durbania*. Aedeagus long with the basal half dilated, narrowing to form a slender, upcurved, distal portion with the tip split into two rounded lobes.

♀. Not known.

L. bergeri differs from *durbania* on the upperside by the ground colour which in *durbania* tends to be more tawny; also the costal stripe of *bergeri* is narrower than that of *durbania*, and the apical patch is less extensive. On the underside the oblique stripe arising from the costa at the end of the discoidal cell is narrower in *bergeri*.

MATERIAL EXAMINED.

Holotype ♂, ZAIRE: 'Kafakumba (KATANGA), iv.1929, F. G. Overlaet', Stempffer dissection no. 3592. In the MRAC, Tervuren. This is the only specimen known at present.

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